UNITED STATES PATENT OFFICE.

HERMANN KRUM, OF GOEPPINGEN, GERMANY.

PROCESS OF MAKING ARTIFICIAL LEATHER.

SPECIFICATION forming part of Letters Patent No. 525,985, dated September 11, 1894.

Application filed April 13, 1893. Serial No. 470,219. (No specimens.)

To all whom it may concern:

Be it known that I, HERMANN KRUM, a subject of the King of Würtemberg, in Germany, residing at Goeppingen, Würtemberg, in the German Empire, have invented a new and useful Process of Making Artificial Leather, of which the following is a specification.

The present invention relates to the preparation of soft paper in imitation of, and having the touch and pliability of leather. By the said process, paper of any suitable raw material and of any desired thickness is so impregnated during its treatment on the paper machine and while still in a pulpy or unfinished condition that the same acquires a soft, leathery and pliable quality and also the elasticity, necessary for the subsequent embossing to produce the grain in imitation of leather. As an impregnating substance I employ easily soluble unctuous substances, such as glycerine and the like, or non-drying oils soluble in alcohol, such as castor oil, oil of rhodium, oil of horsechestnut, &c.

In carrying out my invention the paper in the paper machine, and while still in an unfinished or a pulpy condition, preferably before passing the last wet-press, is carried through a receptacle filled with an unctuous substance, such as glycerine, or a mixture of glycerine, or of an easily soluble oil with water, or with a mixture of such substances. I may also employ mixtures of non-drying oils soluble in alcohol; but as a rule the first named mixtures are preferable in view of their comparative cheapness. Instead of carrying the paper through a receptacle filled with glycerine or the like, the same may be impregnated by sprinkling or spraying the same with the aforesaid substances, or by any other suitable means. I have also found that the most suitable substance or bath for impregnating the paper is the mixture of about 7° Baumé of glycerine with water. The liquor or menstruum which has been expressed from the paper in its passage through the wet-press is again collected in a receiver and used for diluting the impregnating bath. I thus obviate any waste of the substance employed. The paper thus prepared may now be used without any further treatment, or it may be directly embossed, or it may first be coated with a suitable color or pigment and then embossed.

What I claim, and desire to secure by Letters Patent, is—

1. The process of preparing imitation leather or the like, which consists in impregnating the paper, while in an unfinished or a pulpy condition, with an unctuous substance, substantially as set forth.

2. The process of preparing imitation leather or the like, which consists in passing the unfinished paper, before it leaves the paper machine, through a receptacle containing a bath of an unctuous substance, substantially as set forth.

3. The process of preparing imitation leather or the like, which consists in treating the paper, while in an unfinished or a pulpy condition, with an unctuous substance, then completing the paper, and finally embossing the same with a suitable grain, substantially as set forth.

4. The process of making artificial leather, which consists in impregnating paper, in an unfinished condition, after being formed, and before it has passed the last wet-press, with glycerine, substantially as set forth.

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

HERMANN KRUM.

Witnesses:
AUGUST B. DANTZ,
FERDINAND HOFMANN.