UNITED STATES PATENT OFFICE.

FRIEDRICH EDUARD LANG, OF LEIPSIC-ANGER, GERMANY.

METHOD OF MANUFACTURING CUTTING-BLOCKS.

SPECIFICATION forming part of Letters Patent No. 601,969, dated April 5, 1898.

Application filed December 7, 1896. Serial No. 614,841. (No specimens.) Patented in Germany February 28, 1896, No. 90,803; in England September 8, 1896, No. 19,837; in France September 17, 1896, No. 259,733; in Austria September 28, 1896, No. 46/3,797, and in Hungary October 14, 1896, No. 7,864.

To all whom it may concern:

Be it known that I, FRIEDRICH EDUARD LANG, merchant, of 22 Wilhelmstrasse, Leipsic-Anger, in the Kingdom of Saxony, German Empire, have invented new and useful Improvements in Methods of Manufacturing Hacking, Cutting, and Punching Blocks from any Suitable Kind of Pasteboard, (for which I have obtained a patent in Germany, No. 90,803, bearing date February 28, 1896; in Great Britain, No. 19,837, bearing date September 8, 1896; in France, No. 259,733, bearing date September 17, 1896; in Hungary, No. 7,864, bearing date October 14, 1896; in Austria, No. 46/3,797, bearing date September 28, 1896,) of which the following is a specification.

This invention relates to a new or improved method of manufacturing from any suitable kind of pasteboard blocks serving as bases for hacking, cutting, and punching purposes.

It is a well-known fact that wooden blocks cut across the grain of the wood as hitherto used for hacking, cutting, or punching leave much to be desired as regards durability. These blocks, which must be entirely free of knots, cracks, and clefts, have hitherto been frequently made from pieces of wood glued together. This method, however, is not only very expensive, but, owing to the great number of component pieces, the working surface of the blocks is not in all places of an equal degree of hardness, whereby the hacking, cutting, or punching instruments suffer considerably and are often spoiled. Blocks composed of a number of pieces of wood are further liable to cracking and must frequently be replaned and adjusted, because the incisions made by the instrument remain open. On the other hand, hacking, cutting, or punching blocks made in accordance with my present invention from wood-pulp, leather, straw, or other suitable pasteboards are in all parts of their surface of an exactly equal degree of hardness, and in consequence blunting the edge of the cutting or punching tools or their splintering is completely obviated. Replaning or adjusting is much less frequently required, as the pasteboard blocks can be kept in good working order for a full month or more by occasionally washing them with a moist sponge or cloth. The incisions made by the tools are thereby caused to reclose spontaneously, restoring the former level surface.

The process of manufacturing pasteboard blocks of this description is as follows: A mixture of five parts of gelatin or glue, 1.5 kitchen salt, 0.5 of glycerin, and thirty-five parts of water is heated in a suitable receptacle to 70° or 75° centigrade. Plates of pasteboard are left in this liquid until they are completely soaked and are then placed in a cold bath composed of one part of alum and forty parts of water, and subsequently dried. The pasteboard is then covered with an adhesive composition consisting of two parts of casein, one part of glue, one part of starch, and three parts of water, and as many layers as required for the block are placed together, compressed, and subsequently dried.

The pasteboard sheets by dipping them in an alum-bath obtain an equal degree of hardness.

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

1. The method for producing hacking, cutting or punching blocks by soaking plates of pasteboard in a solution of glue, kitchen salt, glycerin and water, treating them in a bath of alum and water, pasting the plates together, and subjecting the resulting blocks to pressure, substantially as described.

2. The method for producing hacking, cutting or punching blocks by soaking plates of pasteboard in a heated solution of glue, kitchen salt, glycerin and water, treating them in a bath of alum and water, pasting the plates together, and subjecting the resulting blocks to pressure, substantially as described.

3. The method for producing hacking, cutting or punching blocks by soaking plates of pasteboard in a heated solution of glue,

kitchen salt, glycerin and water, treating them in a bath of alum and water, pasting the plates together with a composition of casein, glue, starch and water, and subjecting the resulting blocks to pressure, substantially as described.

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

FRIEDRICH EDUARD LANG.

Witnesses:
EDUARD LOEPER,
RUDOLPH FRICKE.