UNITED STATES PATENT OFFICE.

HUGH McHUGH, OF NEW BEDFORD, MASSACHUSETTS.

IMPROVEMENT IN PASSE-PARTOUT BASES FOR GILDING.

Specification forming part of Letters Patent No. **162,404**, dated April 20, 1875; application filed January 21, 1875.

To all whom it may concern:

Be it known that I, HUGH McHUGH, of New Bedford, Massachusetts, have invented certain new and useful Improvements in the Manufacture of Passe-Partout Panels, and like articles, of which the following is a specification:

My invention relates particularly to the manufacture of panel-mats or passe-partout panels, which require to be mat-gilded or burnished.

I will describe first one practical mode of procedure in the manufacture, and will then point out what I deem to be the more salient features of my improvements.

I make the articles above-named of a composition which is prepared as follows:

The composition is made up of two sub-compounds. Compound No. 1 is prepared in the following way: I take eighteen pounds of glue and nine pints of water. To seven pounds of resin add seven pints of raw linseed-oil. The glue and resin are melted separately. After thoroughly mixing together the ingredients above-named, add as much fine-bolted gilders' whiting as the mixture will absorb, and knead the whole like dough. Compound 2 is prepared as follows: It consists of two and one-half gallons of paper-pulp, one pint of raw linseed-oil, two and one-half pounds of white glue dissolved in eight pints of water, and four ounces of alum. These ingredients should be thoroughly intermingled and mixed with whiting, as above described for compound No. 1.

To use the above, proceed as follows:

If the compounds become hard or set before use, heat or soften the same by steam. When they are softened, take one part of compound No. 1 to two or three parts of compound No. 2, and mix the same. Compound No. 2 will become weakened by repeated steaming, owing to absorption by it of condensed steam in the steam-box, (such as used by ornamenters), which will reduce the strength of the glue element, and unfit the compound for molding. In this case the proportion of compound 1 to be mixed with compound 2 should be increased to make up the deficiency, compound No. 1 being the rectifier. The mixture is kneaded well and thoroughly in whiting, and is then ready for molding. It is put in the mold, or matrix, which has its face well oiled to prevent adhesion of the composition. Over the composition is placed a board dampened on its face, so that the composition will adhere to it. The mold, with board superposed on the composition, is then put in a press, which subjects them to a slight pressure sufficient to give the composition an accurate impression, after which they are taken from the press, and the board is then lifted from the mold, carrying with it the crude composition panel or mat, which is allowed to stand exposed for five or ten minutes, as the conditions may require. It is then put back in the mold in the same position which it before occupied, and is put in the press a second time and subjected to powerful pressure—the more powerful the better. After this pressing operation the composition panel is taken from the mold and is cut off from the board by a knife made for the purpose. It is then put in a frame or shield, and piled up with a number of others, in similar condition, one upon the other, the weight of the pile preventing the individual panels or mats from warping when drying. Or if necessary they may be put in a press and allowed to stand until perfectly dry—which generally requires from four to five days. They are then sand-papered and gilded in the usual manner. The mold may be made of any substance hard enough to resist the pressure applied. It may be of any pattern or design, with arched, oval, square, or round cornered openings, with or without scroll or other ornamentation either in relief or in intaglio.

In the manner above described, I can produce a panel-mat or passe-partout panel expeditiously and economically. It has not that liability to warp that is found in like articles made of straw-board, and it does not require the foundation of whiting with which ordinary mats must be overlaid in order to be mat-gilded or burnished.

I have stated the proportions of ingredients that I prefer to use. It will be understood, however, that the same may be varied without departure from my invention. The amount of compound No. 1 required to rectify compound No. 2 must depend to some extent

upon the experience and judgment of the workman. I use as little of compound No. 1 as I possibly can.

The results which I accomplish are principally due to the glue and whiting. The resin makes the composition soften and set more quickly; the oil causes it to work more smoothly; the alum keeps it from spoiling in hot weather, and the paper-pulp adds to its strength and prevents it from cracking. For the pulp, resin, and linseed-oil other equivalent bodies having like properties may be substituted.

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

1. The herein-described composition for molded panel-mats, passe-partout panels, and like articles requiring to be mat-gilded or burnished, consisting of glue and gilders' whiting combined with oil, resin, and paper-pulp, substantially in the proportions set forth.

2. The herein-described composition for molded articles requiring to be mat-gilded or burnished, consisting of glue, gilders' whiting, oil, resin, paper-pulp, and alum, taken in the proportions substantially as stated.

In testimony whereof I have hereunto signed my name this 19th day of January, A. D. 1875.

HUGH McHUGH.

Witnesses:
ANTOINE ROGER,
JAMES J. GORMLY.