

United States Patent Office.

JAMES H. NEWTON, OF HOLYOKE, MASSACHUSETTS.

Letters Patent No. 100,436, dated March 1, 1870.

IMPROVEMENT IN THE MANUFACTURE OF COMBINED CLOTH AND PAPER FABRIC.

The Schedule referred to in these Letters Patent and making part of the same.

I, JAMES H. NEWTON, of Holyoke, county of Hampden, Commonwealth of Massachusetts, have invented a new and useful Process of Manufacturing Combined Cloth and Paper, of which the following is a specification.

My improved process consists in first preparing the cloth with a heavy sizing of potato starch on each side, or potato starch upon one side, and potato starch mixed with glue in solution upon the other side. It may then be calendered, or pass to the paper-machine without.

I then unite this prepared cloth with the paper in the ordinary paper-machine, while the paper is in a state of pulp, and this combined sized cloth and sheet of paper-pulp passes on to the drying-rolls.

The first drier or the first two or three are kept at a low degree of temperature, so as to set the starch without burning or baking it, thereby preventing dark spots and notes. This low temperature I accomplish either by partially shutting off the steam from the interior of the driers, or by covering the said drier with a non-conducting substance.

This combined paper and cloth then passes over the

remaining driers, and through calenders, the whole process imparting to the fabric a laundry finish.

By this process the paper and cloth are evenly and surely combined, and the fabric comes from the calenders clean, the cloth and paper firmly adhering, and with the desired finish.

By a long series of experiments I have found that by the use of the above process, and starch for sizing, the result desired could be accomplished, and in no other way that I have been able to discover.

I claim—

1. The process herein described of manufacturing combined paper and cloth, consisting in the use of sized cloth, united in the paper-machine with pulp, the whole being passed over driers of different temperatures and through calenders, substantially as set forth.

2. The use of potato starch, with or without glue, in combined paper and cloth fabric, for the purpose of uniting firmly the two materials and giving the desired finish, in the manner described.

Witnesses:

JAMES H. NEWTON.

GEO. H. DEANE,

R. F. HYDE.