United States Patent Office.

JOSEPH G. ISHAM, OF NEW YORK, N. Y.

IMPROVEMENT IN SAND-PAPER.

Specification forming part of Letters Patent No. 5,535, dated April 25, 1848.

To all whom it may concern:

Be it known that I, Joseph G. Isham, of the city, county, and State of New York, have invented a new and useful Improvement in Sand, Glass, and Emery Paper for Smoothing and Polishing; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the manner of making, constructing,

and using the same.

Sand, glass, and emery paper, as heretofore made is covered only on one side the smooth surface of the paper being retained on the other side. The use of such paper is attended with inconvenience and waste, for the cuttingsurface will adhere to the surface of the wood to be smoothed or polished, while the hand or rubber will slip easily on the smooth paper back, and therefore to avoid this the operator must either grasp a portion of the paper in his hand or fold a portion of it around a rubbing-block, which is, in consequence, wasted. My improvement in this article of manufacture avoids this waste and inconvenience, and at the same time presents many advantages of economy in the manufacture and in the use.

The nature of my invention consists in coating both sides of sheets of paper with sand, glass, emery, or other reducing and polishing substance, cemented thereto and extending around the edges thereof. The sheets of paper are to be prepared with glue or other appropriate cement, and then covered with sand, glass, emery, or other reducing or polishing substance, to be evenly laid on in the usual manner, care being taken to extend the glue or other cement and the coating of sand or other substance to the edges of the sheets, that the coating of both surfaces may unite and form properly-rounded edges well covered. The glue or cement and sand or other reducing or polishing substance may be laid on in any appropriate manner desired, whether by hand or by machinery. If desired, one face may be made coarse and the other fine. Paper thus prepared is not only made cheaper by giving

double the amount of polishing-surface for the same amount of paper used, and with but a fraction more labor in the manufacture, but it is stiffer by reason of having both surfaces coated; will adhere to the workman's hand or to a rubber with one face, with the other acts on the material to be polished, thus avoiding the waste occasioned in the use of the old kind by the necessity of grasping or folding it to obtain the required hold; will afford to the workman the advantage in the same piece of a sharp new face on one side and a partlyworn face on the other, or one face coarse and the other fine, thus constituting what may be termed a "tool," which, by simply reversing, will enable him to reduce and polish, instead of using two or more kinds of paper; and, in addition to all this, by reason of the well-covered edges and the greater stiffness, he can operate in angles, recesses, slots, grooves, &c., where the edge and one or both faces can actoperations which cannot be performed with the common sand or glass paper, for by doubling the single sand, &c., paper the edge will be broken.

Having thus pointed out the defects of the sand or polishing paper heretofore made and used, the nature of my invention, and the most prominent of the advantages of my improvement, what I claim as my invention, and desire to secure by Letters Patent, is-

Gluing or otherwise cementing sand, glass, emery, or other reducing or polishing surface onto both sides of sheets of paper, substantially as herein described, whereby the coating on both sides will unite and form wellrounded edges, and thus produce what may be termed a "reducing or polishing tool," presenting the advantages of greater cheapness and durability, and better adaptation to the various kinds of work to be done, and at the same time economizing the time of the operator, as herein described.

J. G. ISHAM.

Witnesses:

A. P. BURNETT, JOHN NORTON.