

# UNITED STATES PATENT OFFICE.

JOHN N. SIGEL, OF ALEXANDRIA, VIRGINIA, ASSIGNOR TO HIMSELF AND  
ROBT. PORTNER, OF SAME PLACE.

## IMPROVEMENT IN SIZING AND WATERPROOFING PAPER, &c.

Specification forming part of Letters Patent No. 41,241, dated January 12, 1864.

*To all whom it may concern:*

Be it known that I, JOHN N. SIGEL, of the city and county of Alexandria, in the State of Virginia, have invented a new and improved process for sizing paper, cloth, or other fibrous material to render it water-proof and increase its strength and durability; and I do hereby declare the following to be a full and exact description of the same.

I take resin, shellac, sandarac, or any other water-proof gum which may be found suitable, and dissolve it in a caustic alkaline solution. I then add to the solution a sufficient quantity of chloric acid to bleach the material, remove the viscid oily matter from the gum, and precipitate the remainder. This precipitate is then removed and dissolved in alcohol, ether, turpentine, or any other suitable spirit. The paper, cloth, or other material is thoroughly saturated with the last-named solution, either by immersion or flowing, or by brushes or rollers, or other suitable means, and may be passed through rollers to assist the permeation of the solution. It is then dried in any suitable way, for which purpose heated rollers may be employed, if desired.

The above-described process is of great value

for making imitation parchment or preparing paper for bank-notes and documents where strength and durability are requisite. I have also applied it with very beneficial effect to paper currency and documents already printed and in use, the effect upon such, when partly worn, being to restore a smooth glossy surface and render the material stronger and more durable than when new.

I do not restrict myself to the specific materials herein named; but propose to use any others of analogous character which will effect the desired objects. Neither do I limit myself to any particular quantities or proportions; but

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

The process above described for treating fibrous materials to render them water-proof and increase their strength and durability.

The above specification of my new and useful process for sizing paper and other material signed by me this 27th day of October, 1863.

JOH. N. SIGEL.

Witnesses:

CHARLES DU BOIS,  
OCTAVIUS KNIGHT.