

UNITED STATES PATENT OFFICE.

PATRICK GRADY, OF NEW YORK, N. Y., ASSIGNOR TO JOHN COCHRANE,
OF SAME PLACE.

IMPROVEMENT IN PAPER-SIZINGS.

Specification forming part of Letters Patent No. **134,797**, dated January 14, 1873.

To all whom it may concern:

Be it known that I, PATRICK GRADY, of the city of New York and State of New York, have invented a certain Compound for Sizing Water-Proof and other Papers, by which the paper is rendered fit for writing, drawing, and printing purposes, and at a great reduction of cost as compared with the sizing now generally in use for such purpose.

The nature of my invention consists in treating the paper with a composition of benzine or naphtha and resin.

I take ten gallons of benzine or naphtha, and, placing it in a close vessel, I add thereto about one and a half pound of resin, which is quickly dissolved, and the composition is then ready for use; but I find that the quality and effect of the size or sizing is greatly improved by remaining about three days or longer previous to using it. More or less of the resin may be used; but the proportions here stated I have found to produce an excellent result. I do not, therefore, limit myself to any specific quantity of the resin. This quantity of the

composition is sufficient for about three hundred yards of paper, fifty-eight inches wide, and weighing twenty-five pounds to the ream, when cut into sheets of nineteen by twenty-eight inches. The unsized paper, on leaving the drying-cylinders, is passed through a sizing box or trough containing the composition at a speed of about twenty feet per minute, the superfluous composition being wiped or scraped off both sides of the paper back into the sizing-box. The paper thus sized should be air-dried, and is usually sufficiently dry after passing through ten feet of space to be calendered and cut up into sheets or made into rolls.

Claim.

I claim as my invention—

The compound for sizing paper, of the ingredients substantially as herein described.
P. GRADY.

Witnesses:

A. B. MALCOMSON, Jr.,
HENRY MARTIN.