

UNITED STATES PATENT OFFICE.

S. LLOYD WIEGAND, OF PHILADELPHIA, PENNSYLVANIA.

ADHESIVE OR GUM PAPER.

Specification forming part of Letters Patent No. 43,731, dated August 2, 1864; antedated July 25, 1864.

To all whom it may concern:

Be it known that I, S. LLOYD WIEGAND, of the city of Philadelphia, and State of Pennsylvania, have invented a new and improved process of applying coating of gum soluble in water to paper for the purpose of making adhesive or gum paper which can be folded without adhering together and kept dry, but upon application of moisture becomes adhesive; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in applying solutions of adhesive gum soluble in water in the form of a thick mucilage in a heated state, and cooling the same after it has been applied to the paper. The gum, when thus applied, sticks or adheres to the paper to which it is applied in a heated state; but after cooling will not adhere to another surface of paper that it may be applied to without being either reheated or moistened or else subjected to pressure.

The useful applications of this process are numerous. Among those most readily apparent are the application of gum to the lapels of envelopes, the gumming of the backs of revenue and postal stamps, and the making of gum-coated paper for printing of election-ticket slips, for altering tickets, and for labels.

The precise manner in which I conduct this process is as follows: I dissolve either gum-arabic, dextrine, or a mixture of them in water until I form a thick mucilage, which when at atmospheric temperatures is a tough elastic mass, and heat the same to such a temperature as to render it of about the consistence of ordinary printers' ink. I coat a form either made of types or cut from one piece of wood or metal adapted to the form in which I desire the gum to be printed, and apply the form to

the surface of paper to be coated, and a coating of gum is thus deposited upon the surface, which for many purposes will cool soon enough spontaneously; but where great rapidity is requisite I have sometimes cooled it by artificial means by contact with cold-conducting surfaces and by currents of air. Upon cooling, it will be found that the papers that have been gummed in this manner may be piled together without adhering, but become adhesive upon the application of moisture.

The rapidity with which sheets thus gummed may be handled is an important advantage in the manufacture of envelopes and gum-coated paper, as it supercedes the necessity of large and cumbrous drying trays and racks, and effects an economy in these manufactures by dispensing with the labor requisite to spread and collect the sheets and envelopes from the drying trays and racks.

I have sometimes, with good results, added a small amount of sugar to the gum used for this process; but have, when an excess is employed, observed that the absorption of moisture from the atmosphere rendered it prematurely adhesive.

I am aware that gums and cements have been applied in a heated state in the arts for the purpose of cementing materials together, and this I therefor disclaim; but

What I do claim as my invention, and desire to secure as such by Letters Patent, is—

The application of gums, substantially in the manner or in any equivalent, and with the effect hereinbefore set forth

S. LLOYD WIEGAND.

Witnesses:

ISAAC H. STEEVER,
JOHN WHITE.