UNITED STATES PATENT OFFICE.

JOHN LANZA, OF NEW YORK, N. Y.

IMPROVEMENT IN FORMING METALLIC CHARACTERS ON PAPER, &c.

Specification forming part of Letters Patent No. **55,679**, dated June 19, 1866.

To all whom it may concern:

Be it known that I, JOHN LANZA, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Metallic Writing-Fluids; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists in a peculiar solution or writing-fluid, composed of gum-arabic, gum-ammoniac, and the juice of garlic, and the use of the same, in connection with metallic or earthy dust, for the purpose of ornamental writing and printing.

In making this writing-fluid, you may take equal parts of gum-arabic and gum-ammoniac and dissolve the same in pure water—say rain or distilled water—making the solution about the consistency of the common gum solution used for sealing letters. Then add to this mixture about a tea-spoonful of the juice of fresh garlic to every two ounces of the gum mixture. Take a common pen and write with this fluid in the usual manner. Then leave the writing to dry and the writing will scarcely be noticed. Now breathe strongly on this writing in order to somewhat moisten the same, and then rub the writing with a little dust—say of brass, copper, lead, gold, silver, or other metal or similar dust—which will adhere to the writing and give a metallic surface.

The dust may be applied by a lock or brush of raw cotton or other suitable pad or substance. The excess of dust may be brushed from the writing, when the letters will appear very perfect and of a beautiful metallic luster.

This mode of writing may be applied in various ways wherever ornamental writing is desired, and also for secret correspondence, which may be interlined between the lines of ordinary writing.

I am aware that printers have employed a method of bronzing letters, and that a similar method may have been used with manuscript letters. Therefore I confine my claims to the above-described invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The above-described writing-fluid for the purpose of making metallic or other dust (or metallic or earthy mixtures) adhere to the writing, and thus give metallic letters, substantially in the manner and for the purposes set forth.

2. The above-described writing as a new and useful improvement, when the above-described fluid is employed, substantially as described.

JOHN LANZA.

Witnesses:

DANIEL BREED,

EDM. F. BROWN.