

UNITED STATES PATENT OFFICE.

JAMES SPOONER HOWARD, OF MANSFIELD, ASSIGNOR TO HIMSELF, E. ADAMS, JR., OF ATTLEBOROUGH, T. E. GROVER, OF MANSFIELD, AND N. CARPENTER, OF ATTLEBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN ELECTROPLATING WITH ANTIMONY.

Specification forming part of Letters Patent No. **100,038**, dated February 22, 1870.

To all whom it may concern:

Be it known that I, JAMES SPOONER HOWARD, of Mansfield, in the county of Bristol and State of Massachusetts, have invented a solution by which I can deposit antimony upon metals by electroplating; and I do hereby declare the following to be a full, clear, and exact description of my invention.

My solution is as follows: six (6) fluid ounces sulphate of ammonia; one-fourth ($\frac{1}{4}$) fluid ounce cyanide potassa; eight (8) fluid ounces sulphate of antimony; one (1) gallon of water, (soft preferred.) Filter the whole.

These proportions may be varied from the exact quantities given; but they must be substantially as stated. When the solution is prepared the process of electroplating is the same as generally employed.

The advantage of electroplating with anti-

mony is, that I obtain a cheaper plate than by any other deposit.

I do not claim it as better, but simply as being cheaper and well adapted to plating many articles when it is desirable to save expense; neither do I claim any particular process of electroplating, as any known process will accomplish the purpose sought; but

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

The solution, substantially as given above, for electroplating with antimony.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES SPOONER HOWARD.

Witnesses:

CARROLL D. WRIGHT,
CHARLES F. BROWN.