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UNITED STATES PATENT OFFICE.

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METAL ALLOY.

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To all whom it may concern:

Be it known that I, BARNETT WRIGHT MACY, a citizen of the United States, residing at Jacksonville, in the county of Duvall and State of Florida, have invented certain new and useful Improvements in Metal Alloys, of which the following is a specification.

The purpose of my invention is to provide a metal alloy, or composition, having special electrical resistance characteristics, including the property of medium resistance in electrical conductivity, a melting point higher than that of pure copper, and possessing a property that will permit it to be drawn, or otherwise shaped, to form durable, efficient and otherwise desirable strips, strands or filaments suitable for use in various relations with various means and devices where resistance material is required. The alloy in question affords a constant resistance under varying temperatures and has exceptionally efficient thermo-conductivity; does not oxidize in use, and being of medium resistance gives a most advantageous scale in measuring instruments or rheostats where a gradual scale is needed.

Said metal alloy is composed of pure copper, uranium, manganese and nickel in proportions substantially as follows:

Copper	½ to 5%
Uranium	2 to 6%
Manganese	1 to 4%
Nickel	85 to 93%

The alloy is formed by melting the several ingredients in substantially the proportions above stated, mixing and fusing.

It will be noted that quite a variation in the quantity of each ingredient may be made without departing from my said invention, and I, therefore, do not wish to be limited to the proportions stated, but to have it understood that my invention is as broad as defined in the appended claims.

Equivalent materials are of course also intended to be covered by the claims, specific terms being used for clearness of definition but not for limitation except as indicated.

This alloy in its various proportions gives a resistance of from 180 to 294 ohms per mill foot, according to the service required, and will not break down structurally, oxidize or corrode. In actual use the alloy in the scale mentioned has been found to give excellent results as required for various purposes.

Having thus fully described my said invention, what I claim is new and desire to secure by Letters Patent is:

1. A metal alloy composed of copper, uranium, manganese and nickel in substantially the proportions stated.

2 A metal alloy composed of ½ to 5% pure copper, 2 to 6% uranium, 1 to 4% manganese, 85 to 93% nickel.

3. A composition of matter consisting largely of nickel and containing effective amounts of manganese, uranium and copper but not over six per cent of each, substantially as set forth.

4. A composition of matter consisting largely of nickel and containing effective amounts of manganese, uranium and copper, substantially as set forth.

5. A composition of matter comprising a predominating proportion of nickel and effective but relatively small proportions of manganese, uranium and copper, substantially as set forth.

6. An electrical resistance element formed of an alloy comprising a predominating proportion of nickel and effective but small proportions of manganese, uranium and copper, substantially as set forth.

In witness whereof, I have hereunto set my hand and seal at Jacksonville, Florida, this 6th day of December, A. D. nineteen hundred and twenty-one.

BARNETT WRIGHT MACY. [L. S.]

Witnesses:

STANTUS WALKER,

W. P. LEMMON.