UNITED STATES PATENT OFFICE.

THOMAS HARRINGTON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH J. SOLOMON AND ANDREW J. LOECHER, OF SAME PLACE.

IMPROVEMENT IN ANTI-FRICTION METALS.

Specification forming part of Letters Patent No. **162,065**, dated April 13, 1875; application filed March 18, 1875.

To all whom it may concern:

Be it known that I, THOMAS HARRINGTON, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Anti-Friction Metals; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and make the same.

My invention consists of a hard anti-friction metal, the component parts of which are copper, seventy-two parts; zinc, twelve parts; nickel, six parts; tin, six parts; plumbago or pure carbon, four parts.

The nickel is fused in a suitable crucible and the plumbago or carbon added thereto, whereby the former will absorb a great proportion of the carbon, or of the carbon contained in the plumbago, and thus incorporate the same therewith. To the combined nickel and carbon there are now united, by fusion, the copper, zinc, and tin.

It will be found that, although the compound is exceedingly hard in its nature, the carbon is so disposed therein that while the metal wears away in service very slowly the particles of unctuous properties are successively and continuously presented, and thus the anti-frictional qualities of the prepared metal are rendered reliably and unfailingly serviceable.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The hard anti-friction metal consisting of tin, nickel, zinc, copper, and plumbago or pure carbon, substantially as and for the purpose set forth.

THOMAS HARRINGTON.

Witnesses:

JOHN A. WIEDERSHEIM,

A. P. GRANT.