

UNITED STATES PATENT OFFICE.

SAMUEL SINGLEY, OF NEW YORK, N. Y., ASSIGNOR TO THE MAGNOLIA
ANTI-FRICTION METAL COMPANY, OF NEW YORK.

ANTI-FRICTION ALLOY.

SPECIFICATION forming part of Letters Patent No. 429,157, dated June 3, 1890.

Application filed June 22, 1889. Serial No. 315,238. (Specimens.)

To all whom it may concern:

Be it known that I, SAMUEL SINGLEY, of the city, county, and State of New York, have invented a new and Improved Anti-Friction Alloy, of which the following is a specification.

My composition consists of the following metals, in the proportions substantially as stated:

Lead.....	80	pounds.
Antimony.....	15	"
Tin.....	5	"
Bismuth.....	$\frac{1}{4}$	"
Silver.....	$\frac{1}{4}$	"

100 $\frac{1}{2}$ —say 100 pounds.

These proportions will vary ten or twenty per cent., depending upon the quality of the lead used. Hard lead will require less of the other ingredients. Soft lead will require more, in proportion to the weight of the lead. The ingredients are melted and added one by one, care being taken to prevent overheating, and the mass being stirred and skimmed from time to time.

The lead, when molten, I prefer to cleanse by the application of sufficient sal-ammoniac by adding four to eight ounces of the sal-ammoniac, mixing thoroughly, keeping the molten mass stirred, and removing the scum and dross as it rises; and I also prefer to treat the lead and antimony with sufficient powdered graphite to cover the molten mass, stirring repeatedly, as I have found such treatment to produce better results. If the lead is pure or has been previously cleansed, the sal-ammoniac may be omitted.

What I claim, and wish to secure by Letters Patent of the United States, is—

The composition of matter to be used for anti-friction purposes, consisting of lead, antimony, tin, bismuth, and silver, substantially as described.

SAMUEL SINGLEY.

Witnesses:

CHAS. B. MILLER,
WALTER K. GRIFFIN.