

# UNITED STATES PATENT OFFICE.

STUART GWYNN, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN METALINE COMPANY, OF SAME PLACE.

IMPROVED COMPOSITION OF MATTER, CALLED "METALINE," FOR JOURNALS, BEARINGS, &c.

Specification forming part of Letters Patent No. **101,865**, dated April 12, 1870; antedated March 30, 1870.

*To all whom it may concern:*

Be it known that I, STUART GWYNN, of the city of New York, in the county of New York and State of New York, have invented a new Composition of Matter, which I denominate "Metaline No. 7," designed for the purpose of journal-boxes, journal-box linings, and other similar articles having surfaces that are intended to be subjected in use to friction.

The nature of my invention consists in combining anthracite coal, and tallow from which the oil has been extracted, upon the principles and in pursuance of the method fully described and illustrated in the specification annexed to my application for Letters Patent for a process for making metaline, filed in the Patent Office simultaneously herewith, to which reference is made, whereby I produce a composition of matter having such properties and conditions that so little friction will actually be caused, and so little heat developed in the practical use of the above-named articles made of it, in machinery and elsewhere in the arts, that the necessity for the application of oil or any other lubricant to their surfaces is entirely obviated.

To make this composition, I take of anthracite coal ninety parts, and tallow, from which the oil has been extracted, ten parts. The coal is to be reduced to an impalpable powder, as used in commerce for foundry purposes. Tallow from which the oil has been extracted is also used in commerce. The two are to be intimately incorporated by being ground in a

warm mill. The better plan is to grind together about equal parts first, for, say, an hour, and then add, a portion at a time, the balance of the coal, while the grinding is continued. The mass is then to be subjected to a severe pressure in suitable molds, to give it the required solidity.

In journal-boxes made of or lined with this compound, shafts may be run at a high rate of speed without a lubricant.

While I intend to limit myself in this specification to carbonaceous substances for the principal element of said compound, whose conditions need modification to convert it into metaline, other of such substances besides anthracite coal, its equivalents for the purpose intended, may be employed, and other agents besides spermaceti, its equivalents for the purpose intended, may be employed. So, also, the relative proportions of the two, or their equivalents, may be varied within the limits of the process hereinbefore referred to, without departing from the spirit of my invention.

I claim as my invention—

The manufacture or preparation of a composition of matter, which I denominate "Metaline No. 7," when the same possesses the properties and is compounded of the ingredients, or their equivalents, in the proportions, by the process, and for the purposes set forth.

STUART GWYNN.

Witnesses:

J. P. FITCH,  
HENRY N. MYGATT.