

United States Patent Office.

STUART GWYNN, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN METAL-
LINE COMPANY, OF SAME PLACE.

Letters Patent No. 101,861, dated April 12, 1870; antedated March 30, 1870.

IMPROVED COMPOSITION OF MATTER, CALLED "METALINE," FOR JOURNALS, BEAR- INGS, &c.

The Schedul. referred to in these Letters Patent and making part of the same.

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. 1," 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 lignum-vitæ and spermaceti, or their equivalents, 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, and to which reference is made, whereby I produce a composition of matter having such properties and conditions that so little friction will 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 of matter I take of lignum-vitæ wood eighty parts by weight, and reduce it to a fine powder, by first rasping or sawing it and then grinding it in a bur-stone or other suitable mill. I then take of spermaceti twenty parts, and first mix with it about an equal proportion of the wood powder, by grinding them together in a suitable mill or mixer until completely mixed. I then add the rest of the powder, a little at a time, while the grinding or stir-

ring in the mill or mixer is continued. The mass is then to be subjected to severe pressure in a mold, to give it the required degree of solidity.

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

While I intend to limit myself in this specification to vegetable substances for the principal element of said composition, whose conditions need modification to convert it into "metaline," other products of vegetable growth besides lignum-vitæ, its equivalents for the purpose intended, may be employed, and other agents besides spermaceti, its equivalents for the purpose intended, may be used. So also the relative proportions of the lignum-vitæ and spermaceti, or their equivalents above stated, may be varied within the limits of the process hereinbefore referred to, without departing from the spirit of my invention.

Claim.

I claim as my invention—

The manufacture or preparation of a composition of matters, which I denominate "Metaline No. 1," 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.