

UNITED STATES PATENT OFFICE.

GEORGE M. DENISON, OF ESSEX, CONNECTICUT.

IMPROVEMENT IN COMPOUNDS FOR LUBRICATING AXLES.

Specification forming part of Letters Patent No. 120,631, dated November 7, 1871.

To all whom it may concern:

Be it known that I, GEORGE M. DENISON, of Essex, in the county of Middlesex and State of Connecticut, have invented a certain Compound for Lubricating Axles, Shafting, &c., of which the following is a specification:

This invention consists in the combination of three elements or substances commonly known as tallow, sulphur, and soapstone, in proper proportions, to form a compound that, when applied to axles or bearings of machinery, serves as a most superior lubricator, so completely preventing friction that when applied to hot journals they will soon become cool without the necessity of being stopped. Having experimented for several years, as my several caveats in the Patent Office represent, by combining various elements or substances to form a lubricator, I have discovered that the three substances known as tallow, sulphur, and soapstone, when properly combined, give the best results in overcoming friction and in durability. The proportions I find can be varied greatly without destroying the lubricating properties; but for cheapness and excellence I prefer to use one part of sulphur by weight, about two parts of tallow, and three or

three and one-third of soapstone. The tallow is melted and the other ingredients are added, and will form a mass that can be applied to the bearings in about the consistency of stiff mortar. Oils abounding in stearine will to a certain extent serve instead of the tallow, as its chief lubricating agent is stearine; so, too, talc or any substance which is chiefly composed of silica, magnesia, and water, will serve instead of the soapstone. Brimstone may also be used instead of sulphur; but I regard these merely as equivalents of the three elements forming my combination.

I claim—

1. The combination of the three substances, tallow, sulphur, and soapstone, or their equivalents, to form a lubricating compound without reference to their proportions.

2. A compound for lubricating purposes, when made of the materials and in about the proportions hereinbefore described.

GEORGE M. DENISON.

Witnesses:

E. N. ELIOT,
W. E. SKEEL.

(87)