

# UNITED STATES PATENT OFFICE.

THOMAS COLGAN, OF BROOKLYN, NEW YORK.

## LUBRICANT FOR STEAM-CYLINDERS.

SPECIFICATION forming part of Letters Patent No. 280,134, dated June 26, 1883.

Application filed December 9, 1882. (No specimens.)

*To all whom it may concern:*

Be it known that I, THOMAS COLGAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful  
5 Improvement in Lubricants for Steam-Cylinders; and I do hereby declare that the following is a full and exact description thereof.

My invention relates to a lubricant specially adapted for the valves and cylinders of steam-engines, as an improved substitute for the cylinder-oils now in use.

The object of said invention is to obtain a durable lubricant in solid form entirely free from gum, and which shall possess such cleansing  
15 qualities as that it will render and keep the bearings constantly bright and clean.

It consists in the addition of beeswax to a compound of petroleum, paraffine, and plumbago, prepared substantially in the following  
20 manner and proportions: The petroleum is first condensed by heating and agitating it for two or three hours (more or less) until its more volatile constituents are evaporated therefrom. In this process the oil may be heated to the  
25 boiling-point. To this condensed petroleum, while yet hot, I add beeswax, paraffine, and finely-pulverized plumbago, in about the proportions of sixteen ounces petroleum, one to eight ounces of beeswax, one to eight ounces  
30 of paraffine, and one to eight ounces of plumbago, the proportions being varied according to the density required in the product, and which is determined, to some extent, by the market in which it is to be sold, whether in a  
35 cold or hot climate. The compound is kept

hot and thoroughly agitated during the process of admixture to insure an intimate combination of its elements, and is then poured into molds, preferably spherical in form and of various sizes, and allowed to solidify there-  
40 in. When cold, the lubricating compound becomes hard and solid, and for use these solid balls are dropped into the lubricating-cups of the engine, where the heat will melt them as required.

My Letters Patent No. 241,932, of May 24, 1881, describe a lubricating compound composed of petroleum, paraffine, and plumbago; but said compound, while very useful for general  
45 purposes, has not sufficient body for use in steam valves and cylinders. I have overcome this deficiency in my present invention, and have produced a more perfect, efficient, and durable lubricating compound for use in  
50 connection with steam-engines than any heretofore known. 55

I claim as my invention—

A lubricating compound in solid form for steam valves and cylinders, composed of petroleum, beeswax, paraffine, and plumbago, 60  
admixed in substantially the proportions set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS COLGAN.

Witnesses:

J. F. ACKER, Jr.,  
DAVID A. BURR.