

## UNITED STATES PATENT OFFICE.

EDWARD DENNIS, OF SING SING, NEW YORK, ASSIGNOR TO CATHARINE DENNIS, OF SAME PLACE, AND MARY E. CARROLL, OF NEW YORK CITY.

## IMPROVEMENT IN PREPARING HYDROCARBON OILS FOR USE.

Specification forming part of Letters Patent No. 123,683, dated February 13, 1872.

*To all whom it may concern:*

Be it known that I, EDWARD DENNIS, of Sing Sing, in the county of Westchester and State of New York, have invented an Improvement in Non-Explosive Oil; and the following is declared to be a correct description of the same.

Liquid hydrocarbon, such as gasoline, benzine, naphtha, and other products of coal-oil, are dangerous to transport and to make use of on account of their inflammability, and some of them are actually explosive; hence accidents occur from the ignition of the vapors, the scattering of the contents, the breaking of the reservoirs or vessels containing the same, and otherwise.

The object of my invention is to render liquid hydrocarbon semi-fluid or partially solid, for preventing the same being scattered or flowing over a large area in case the vessel holding the same becomes broken; also to prevent explosion of the liquid; and to lessen leakage in transportation; and these objects are accomplished without increasing the bulk of such liquid hydrocarbon to any detrimental extent.

I have discovered that magnesia can be added to coal-oil, naphtha, benzine, and similar liquid hydrocarbon, and that it will become semi-liquid or of a plastic or pasty consistence, and that sufficient can be added to render the mass so firm that it may be cut out and re-

moved in lumps or blocks by a shovel or otherwise, and that this magnesia can be added without materially increasing the bulk or space occupied by the oil; and with some grades of liquid hydrocarbon the space occupied by the oil and magnesia appears to be less than that occupied by the oil alone.

The magnesia is not injured by heat; hence the hydrocarbon can be burned out from the magnesia in a furnace adapted to the same without loss of magnesia; or the compound might be placed in a lamp adapted to burning the oil from the same; or the liquid hydrocarbon might be freed from the magnesia by pressure; or the same might be evaporated in a still and condensed.

Other materials, such as pulverized charcoal, might be added with the magnesia; or other material—having equivalent properties of mixing with oils for rendering them partially solid without increasing the bulk or injuring the liquid hydrocarbon—might be made use of.

I claim as my invention—

The hydrocarbon liquid rendered partially solid by the admixture of the material specified, without increasing the bulk or to any considerable extent, as set forth.

Signed by me this 28th day of December, A. D. 1871.

Witnesses: EDWARD DENNIS.

GEO. T. PINCKNEY,  
CHAS. H. SMITH.