

UNITED STATES PATENT OFFICE.

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LUBRICANT AND SEALING COMPOUND.

No Drawing.

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This invention relates to sealing compositions, and particularly to one adapted to serve, in some instances, as a lubricant, and which at the same time will not be cut, disintegrated or dissolved by contact with petroleum distillates, such for instance as gasoline, benzine, naphtha, etc.

Gauges for use in connection with gasoline containers to determine the level or quantity of gasoline therein, have moving parts the bearings of which are exposed to the gasoline. It is desirable to use a composition with such gauges that will serve as a seal to prevent the passage or escape of any gasoline vapors through the bearings of the gauges to the outside of the tank or to such electrical connections as may be associated with level indicating instrumentalities. It is also desirable that such sealing composition shall serve, in a measure, as a lubricant which will not be cut or dissolved by contact with gasoline or gasoline vapor. Such a composition is especially desirable where moving gauge parts extend outside of the gasoline tank and particularly when such parts have associated electrical connections.

Stuffing boxes filled with soft soap without any softening agent have heretofore been proposed for this service, but the soap becomes dry and hardens very soon after installation and often it will temporarily cement the moving parts and prevent their proper operation. The composition herein proposed has a softening agent added to it that permanently maintains it in a soft jelly-like consistency similar to petroleum jelly.

The purpose of the present invention is to provide a composition, preferably of soft-jelly-like consistency, which will serve both as a lubricant and as a seal for moving parts and that will not be affected by the action of gasoline or similar grease-attacking liquids and that will not harden or become dry with age.

Another object of the invention is to provide a composition of this character that will not readily melt at ordinary temperatures and drain from the parts to which it is applied.

The composition formed in accordance

with this invention consists, in its preferred form, of the following main ingredients:

Glycerine.....	2 pounds	55
Corn starch.....	4 ounces	

To this is added enough water to thin the mixture and the whole is then boiled for approximately ten minutes and stirred continuously while boiling, causing the mixture to be converted into a substantially homogeneous composition of jelly-like consistency. The composition may also be formed by using starch previously hydrolized by the action of a dilute acid or an enzyme by which the elements of water are added to the starch structure and then adding the glycerine while boiling. The purpose of boiling, after the addition of the glycerine to the hydrolized starch, is to convert the mixture into a homogeneous composition of jelly-like consistency.

This should produce a composition of soft jelly-like form, the desired consistency of which, to meet the requirements of the particular use, is determined by the quantity of thinning water added.

It is found in practice that this composition, in addition to serving as a lubricant for instrument bearings, will effectually seal joints and openings against the escape of gasoline and other grease attacking liquids or vapors therethrough. It is for this reason admirably adapted for use in the bearings and packing glands for shafts of gasoline level indicating devices, where such shafts project through a wall of the associated container and communicate movements from a float to an indicating means, which may include a rheostat in adjacent relation to the outer shaft end. A composition of this character is also admirably adapted for use as a lubricant for moving parts submerged or associated with petroleum distillates. In some instances the composition may serve as a carrier for flake graphite or mica or other substances adapted to be used on operating parts submerged in gasoline or other hydrocarbons.

Although corn starch has been found to be particularly well suited for use in making the composition herein disclosed, other forms of starch may also be used to form a

jell that is not miscible with petroleum distillates but which may be permanently softened by the addition of glycerine or other non-drying compounds of the polyhydroxy-alcohol group such as glycol, producing a compound that does not lose its jelly-like consistency at ordinary temperatures. The hydrolized starch and glycerine composition herein proposed is admirably adapted for use in connection with moving parts of an indicator and the like that are associated with gasoline containers.

What I claim is:

1. A sealing and lubricating composition which is substantially homogeneous and of jelly-like consistency and which is composed of glycerine and a sufficient quantity of

starch, which is at least partially hydrolyzed, to impart the desired consistency to the composition, the glycerine and starch being substantially in the proportion by weight of eight parts of glycerine to one part of starch.

2. The method of making a lubricant and joint sealing compound of the class described, consisting in mixing glycerine and corn starch in substantially the proportions of two pounds of the former to four ounces of the latter, adding water to thin to a predetermined consistency, and then boiling approximately for ten minutes while stirring continuously.

In testimony whereof I affix my signature.
RALPH H. REITER.