

P. WENDT.
OIL TESTING MACHINE.
APPLICATION FILED OCT. 26, 1911.

1,024,872.

Patented Apr. 30, 1912.

Fig. 1.

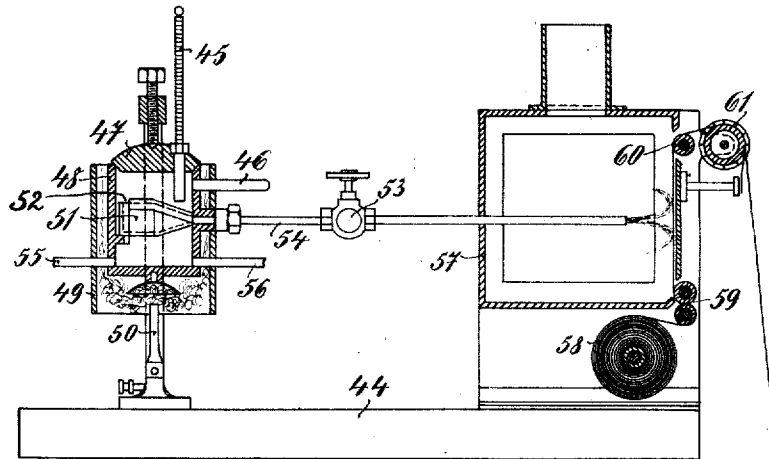
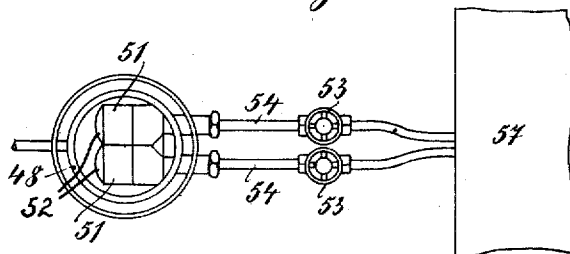


Fig. 2.



Witnesses
Marie A. Braun
Ora F. Paulsen.

Inventor:
Paul Wendt
by L. K. Schmitt
Attorney

UNITED STATES PATENT OFFICE.

PAUL WENDT, OF HAMBURG, GERMANY, ASSIGNOR TO OELWERKE-STERN SONNEBORN
ACTIENGESSELLSCHAFT, OF HAMBURG, GERMANY, A COMPANY.

OIL-TESTING MACHINE.

1,024,872.

Specification of Letters Patent.

Patented Apr. 30, 1912.

Application filed October 26, 1911. Serial No. 658,881.

To all whom it may concern:

Be it known that I, PAUL WENDT, a citizen of the free town of Lübeck, and resident of 4 Hinter den Hoefen, in the free town of Hamburg, German Empire, have invented a new and useful Oil-Testing Machine, of which the following is a specification.

This invention relates to machines for testing oils and consistent fats as to their lubricating properties and relates more particularly to means whereby the lubricating properties of the oil or fat can be determined when in contact with either wet or dry steam. This is often necessary owing to the fact that the steam takes up more or less oil according to the nature of the latter.

The present invention comprises subject-matter divided out from my concurrent patent application Serial No. 618267 filed 1 April 1911 and is particularly intended for use in conjunction with the apparatus described in my aforesaid concurrent application.

In order that the invention may be clearly understood reference is made to the accompanying drawings, whereon is shown the preferred method of carrying out the invention.

Figure 1 is a sectional elevation showing the arrangement for testing oil or fat when in contact with steam. Fig. 2 is a partial plan view of Fig. 1.

In order that different oils or fats may be tested under exactly similar conditions, when in contact with steam, the different oils or the like are supplied to a plurality of pans in a closed container which is provided with steam inlet and outlet pipes, tubes leading from the pans being adapted to direct the oil on to a paper-strip or like continuous record, the oil being sprayed on to the paper-strip under the influence of the steam pressure in the container.

On the drawings the apparatus is shown as intended for simultaneously testing two different kinds of oil under exactly similar conditions, but it will of course be understood that by providing more than two pans, any desired number of different oils can be tested simultaneously.

On the base plate 44 is mounted a container 48 closed by means of a cover 47 and provided with a thermometer 45 and manometer tube 46, the container 48 being surrounded by a jacket 49 and located below

the same is a burner 50, the flame and hot gases from the same passing between the container 48 and jacket 49 and the heat therefrom being thus fully utilized. In the container 48 are arranged one or more closed pans 51 having a comparatively small inlet opening 52. As shown at Fig. 2 two such pans 21 may be provided but, if desired, only one of such pans may be provided. As may be seen from the drawings the pans 51 are of conical form opening at their narrow ends into tubes 54 provided with cut off valves 53. The container 48 is provided with a steam inlet 55 and an outlet for steam or condensed steam 56. The tube 54 enters a chamber 57 which is provided with a recording strip leading from a paper roll 58 and passing over rollers 59 and 60 to a winding-up roller 61.

The method of testing the oil or fat in the apparatus is as follows: The pans 51 are filled with the oil to be tested and the container 48 is then tightly closed, steam being thereafter admitted to the container by way of the pipe 55. The oil under the pressure of the steam within the container 48 is forced through the tubes 54 carrying with it more or less steam, the oil and steam being sprayed in known manner onto the paper-strip within the chamber 57. By this means the quantity of steam taken up by the oil can be determined and if desired, the layer of oil can be removed from the paper-strip and subjected to further test in the apparatus described in my aforesaid concurrent patent application.

It is preferable to carry out the test with steam at a uniform pressure, the test being preferably carried out first with dry steam and then with wet steam, so that a good comparison may be obtained and the value of the oil thereby accurately estimated, as in this apparatus the oil is taken up by the steam in the same manner as in steam engines, in which changes in pressure and temperature take place.

If the whole of the oil within the pans 51 is forced out by the steam, the residue within the pans can be examined and the different kinds of oil thereby readily compared.

I claim:

1. In a machine for testing oil and fat, a container, a closure for said container, a plurality of pans within said container and adapted to receive the material to be tested,

a plurality of tubes leading from said pans, means for supporting a recording strip in proximity to the ends of said tubes, and means for supplying steam to said container.

5 2. In a machine for testing oil and fat, a container, a closure for said container, a plurality of pans within said container and adapted to receive the material to be tested,
10 a plurality of tubes leading from said pans, means for supporting a recording strip in

proximity to the ends of said tubes, means for supplying steam to said container, and valve means in said tube for controlling the supply through said tubes.

In witness whereof I have hereunto set
my hand in the presence of two witnesses.

15

PAUL WENDT.

Witnesses:

JOSEPH HEIFFER,
FERD. MAYER-GIDION.