

No. 744,585.

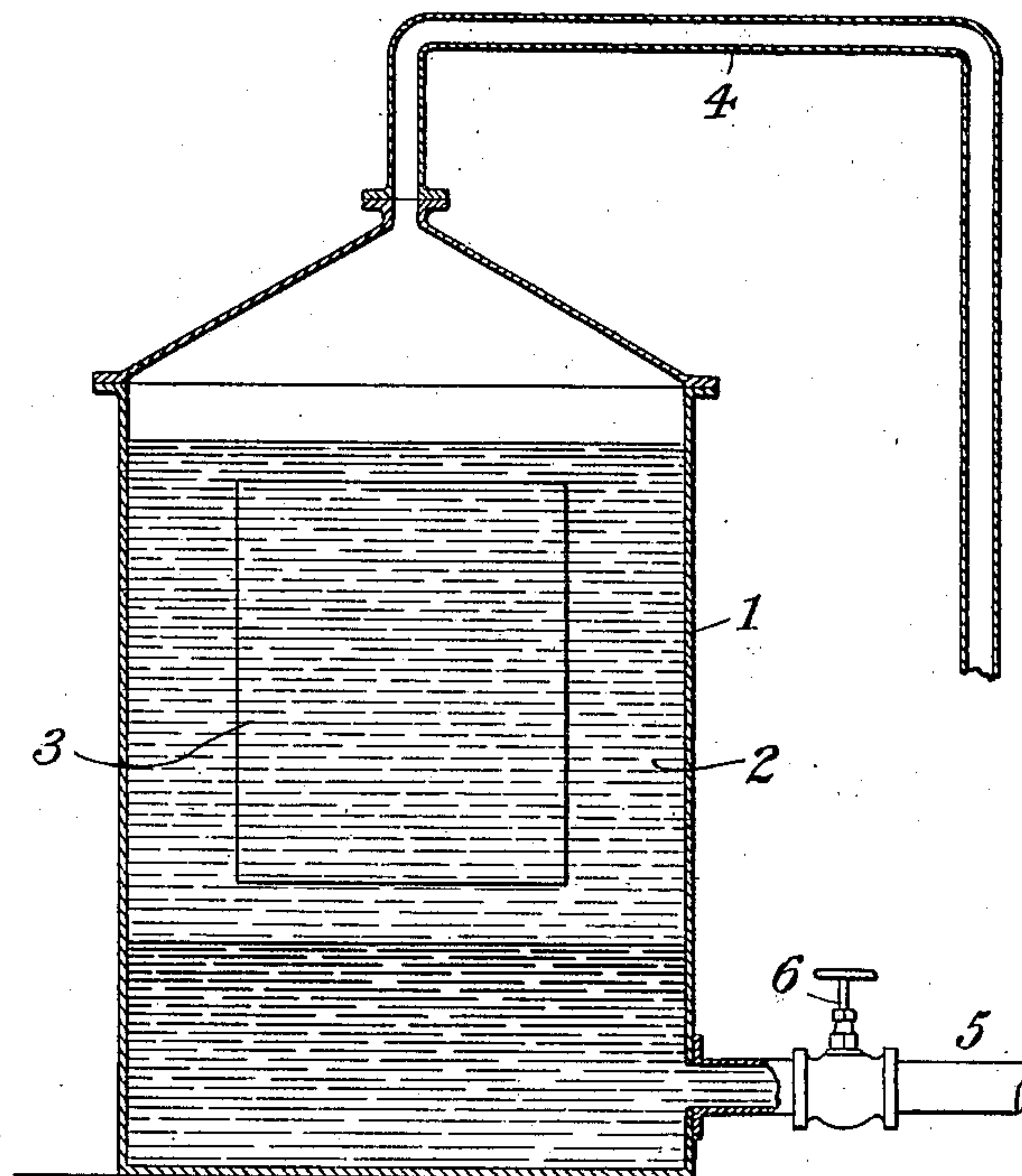
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R. D. MERSHON.

METHOD OF EXTINGUISHING FIRES IN OIL FILLED RECEPTACLES.

APPLICATION FILED AUG. 19, 1902.

NO MODEL.



Witnesses:

*Raphaël Netter*  
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# UNITED STATES PATENT OFFICE.

RALPH D. MERSHON, OF NEW YORK, N. Y.

METHOD OF EXTINGUISHING FIRES IN OIL-FILLED RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 744,585, dated November 17, 1903.

Application filed August 19, 1902. Serial No. 120,201. (No model)

*To all whom it may concern:*

Be it known that I, RALPH D. MERSHON, a citizen of the United States, residing at New York, county and State of New York, have  
5 invented certain new and useful Improvements in Methods of Extinguishing Fires in Oil-Filled Receptacles, of which the following is a specification, reference being had to the drawings accompanying and forming a  
10 part of the same.

As is well known, certain receptacles permanently filled with oil are very liable to injury or destruction from the ignition of the oil. This is particularly true in the case of  
15 devices of the class known as "oil-cooled" electrical apparatus, including transformers, induction-coils, condensers, &c., in which the heat developed by the resistance of the conductors to the passage of the electric current  
20 or by short circuits sometimes results in the ignition of the oil. Fires of this character for reasons well known are difficult to cope with, and although various plans have been proposed for extinguishing them I am not  
25 aware that any of such plans have been found to be practicable. These considerations have led me to devise a method by means of which such fires may be extinguished quickly and easily and which may be practiced without  
30 serious injury to or destruction of the apparatus.

My improved method will be more readily understood by reference to the accompanying drawing, in which—

35 1 represents the casing of an oil-filled receptacle—*e. g.*, a transformer or other electrical device. This casing is made substantially liquid-tight to contain a body of oil 2, which in the case supposed is designed either  
40 to insulate or to cool the transformer-coil 3. The upper part of the case has connected to it in any convenient manner a comparatively small pipe 4, extending some distance away, while to another part of the casing, and preferably  
45 at or near the bottom of the same, is connected a second pipe 5 of suitable size, having a valve 6, by means of which the flow of liquid through it may be readily controlled. Through this pipe 5 a liquid is to be admitted

to the tank in order to displace and expel the  
50 oil, and for this purpose I may employ any liquid which is heavier than the oil in the tank and which is preferably of a non-inflammable nature and capable of extinguish-  
55 ing fire. For this purpose ordinary water may be employed, in which case the pipe 6 is connected to any suitable source of water-supply, preferably under considerable pressure. If for any reason the oil in the recep-  
60 tacle should take fire or is in danger of ignition, the valve 6 is opened and water admitted into the casing. Since the water is heavier than oil, the latter will be rapidly displaced and expelled from the casing through  
65 the pipe 4, leaving the casing filled with water. At the same time fire in any combustible material which may have been used in the construction of the apparatus will be extinguished  
70 by the direct application of the water, which thus performs a useful function in addition to that of expelling the oil.

It will of course be understood that this method may be practiced with any apparatus containing oil, and I am therefore not limited to its use with electrical transformers, as illus-  
75 trated.

What I claim is—

1. The herein-described method of extinguishing fires in oil-filled receptacles, which consists in forcing under pressure into the  
80 casing at a lower level than the oil-vent a non-inflammable liquid heavier than the oil, thereby displacing the latter and causing it to be expelled through an opening at substantially  
85 the highest part of the casing, as and for the purposes set forth.

2. The herein-described method of extinguishing fires in oil-filled receptacles, which consists in forcing under pressure into the casing at a lower level than the oil-vent a liquid  
90 heavier than the oil, thereby displacing the latter and causing it to be expelled through an opening at substantially the highest part of the casing, as and for the purposes set forth.

RALPH D. MERSHON.

Witnesses:

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