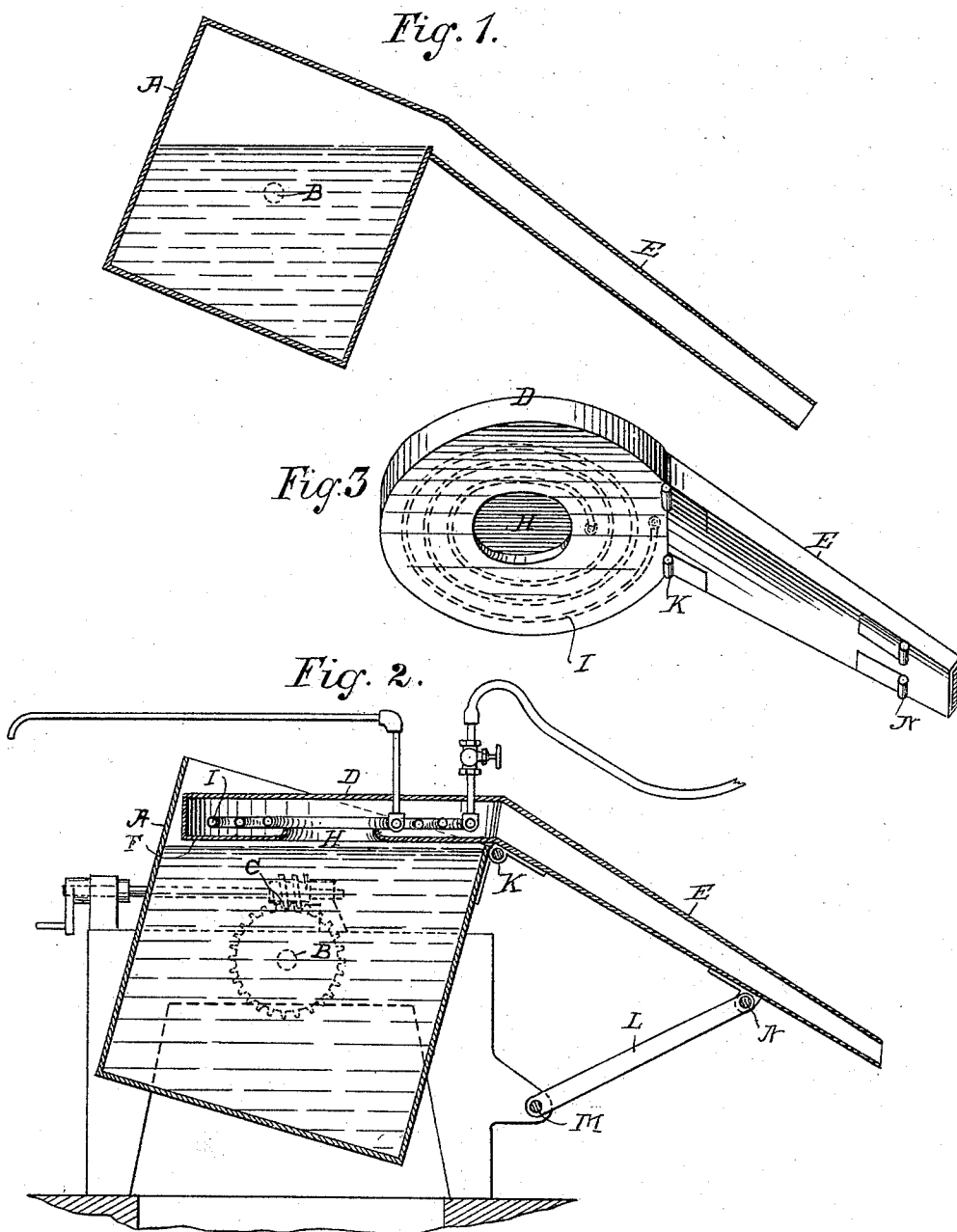


(No Model.)

G. W. SCOLLAY.
TREATING COTTON SEED OIL, &c.

No. 498,822.

Patented June 6, 1893.



Witnesses:

M. Wilson
F. Hammer.

Inventor:

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UNITED STATES PATENT OFFICE.

GEORGE W. SCOLLAY, OF NEW YORK, N. Y.

TREATING COTTON-SEED OIL, &c.

SPECIFICATION forming part of Letters Patent No. 498,822, dated June 6, 1893.

Application filed October 18, 1892. Serial No. 449,244. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE W. SCOLLAY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in the Art of Treating Cotton-Seed, Linseed, and other Vegetable Oils, of which the following is a specification.

My present invention relates to the art of treating cottonseed, linseed and other vegetable oils and it consists of two separate and distinct parts, to wit: (first) of certain novel methods pointed out in the concluding claims, and (second) of certain novel apparatus which may be employed in practicing said methods also pointed out in the claims. But it will be understood that these methods may be practiced with any other suitable apparatus and that the claims for the methods are not in any sense limited by the description herein of such apparatus.

When cottonseed, linseed or other vegetable oils are heated to about the boiling point certain elements are vaporized. This vapor is heavier than air, and remains on the surface of the oil. If the boiling be continued this vapor combines with the oxygen with which it comes in contact, and is then converted into acrolein which is at the temperature present a vapor or gas and which being lighter than air immediately escapes; but the process of conversion is slow, with some oils slower than others, and long continued boiling is necessary to effect the desired result, while the oil is discolored and is otherwise injuriously affected and the acrolein evolved is extremely offensive.

I have discovered that by removing the vaporized elements while still in the form of vapor, without waiting for the vapor to undergo conversion into acrolein, these difficulties are obviated, the oil is made viscid in much less time and with much less expenditure of fuel, the color of the oil instead of being injured is improved and no offensive gas is evolved. Moreover the condensed vapor thus removed is a valuable product. Not only is this method applicable to the treatment of vegetable oils which are commonly made viscid by boiling as above described, but it is also applicable to the treatment of other vegetable oils. For example, by such treatment cottonseed oil

(preferably yellow oil) is not only made more viscid but its color is, at the same time, improved and the empyreumatic odor of the oil discharged. My present experience seems to indicate that the best results are obtained by avoiding an unnecessarily high temperature during treatment.

The treatment may be effected with any apparatus suitable for the purpose. As the vapor is heavier than air it will flow off by gravity if the sides of the vessel containing the heated oil are not too high or if the vessel be tipped, as shown in Figure 1 of the drawings (which is a cross section of a kettle containing oil). It is advantageous to provide the vessel with a spout, as the condensed vapor is thereby led away and may be more easily collected and saved.

I will now describe the structure shown in Fig. 2 which is a cross section of the device which I at present prefer to employ although of course, others differing radically from this might be used.

A is a tank.

B are pivots attached to the tank set in suitable journals. Any suitable means may be provided for tipping the tank or maintaining it in any desired position as the worm and gear C.

D is a cover. E is a spout attached thereto.

F is a marginal trough attached to the cover and H an opening forming a communication between the trough and tank.

I is a cooling coil through which water flows. The cover and spout are hinged to the tank at K.

L is a link attached to a fixed support M and to the spout at N. The metal of the tank between the pivot B and the hinge K form with L parallel twin links, by means of which the inclination of the spout is maintained constant irrespective of the position of the tank.

Fig. 3 is a perspective of the cover and spout.

The operation of this device is as follows: The vapor from the oil passes up through the opening H and is condensed in the trough F and flows thence out of the spout E. By tipping the tank the level of the oil can always be kept near the cover. The cover is always parallel with the oil in the tank, whatever the position of the tank.

Of course various modifications in the structure above described may without departing from the spirit of my invention of improved apparatus and without exceeding the scope of the claims therefor, be employed.

What I claim is—

1. The method of treating vegetable oils, consisting of heating the oil to a temperature at which vapor, which is heavier than air, is given off, and then removing said vapor before it is converted into a vapor or gas which is lighter than air.

2. The method of treating vegetable oils, consisting of heating the oil in a covered vessel to a temperature at which vapor, which is heavier than air, is given off, and then removing said vapor before it is converted into a vapor or gas which is lighter than air.

3. In an apparatus for treating vegetable oils, the combination of a pivoted tank, means for controlling said tank, a trough above the oil, a spout connected with said trough and means for permanently maintaining said trough horizontal.

4. In an apparatus for treating vegetable

oils the combination of a pivoted tank, means for controlling said tank, a cover an artificially cooled trough below said cover, a spout connected with said trough and means for permanently maintaining said trough horizontal.

5. In an apparatus for treating vegetable oils, the combination of a pivoted tank, means for controlling said tank, a cover, a trough below said cover, a spout rigidly connected with said trough hinged to said tank and means for permanently maintaining said trough horizontal.

6. In an apparatus for treating vegetable oils the combination of a pivoted tank, means for controlling said tank, a cover, a trough below said cover, a spout rigidly connected to said trough and parallel links attached at one end to a stationary support and at the other to said cover and spout for permanently maintaining said trough horizontal.

GEO. W. SCOLLAY.

Witnesses:

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