Oct. 25, 1932. R. E. NEST 1,884,134

DISPENSING APPARATUS FOR LUBRICATING OILS

Filed June 23, 1931 3 Sheets-Sheet 1

Fig. 1.

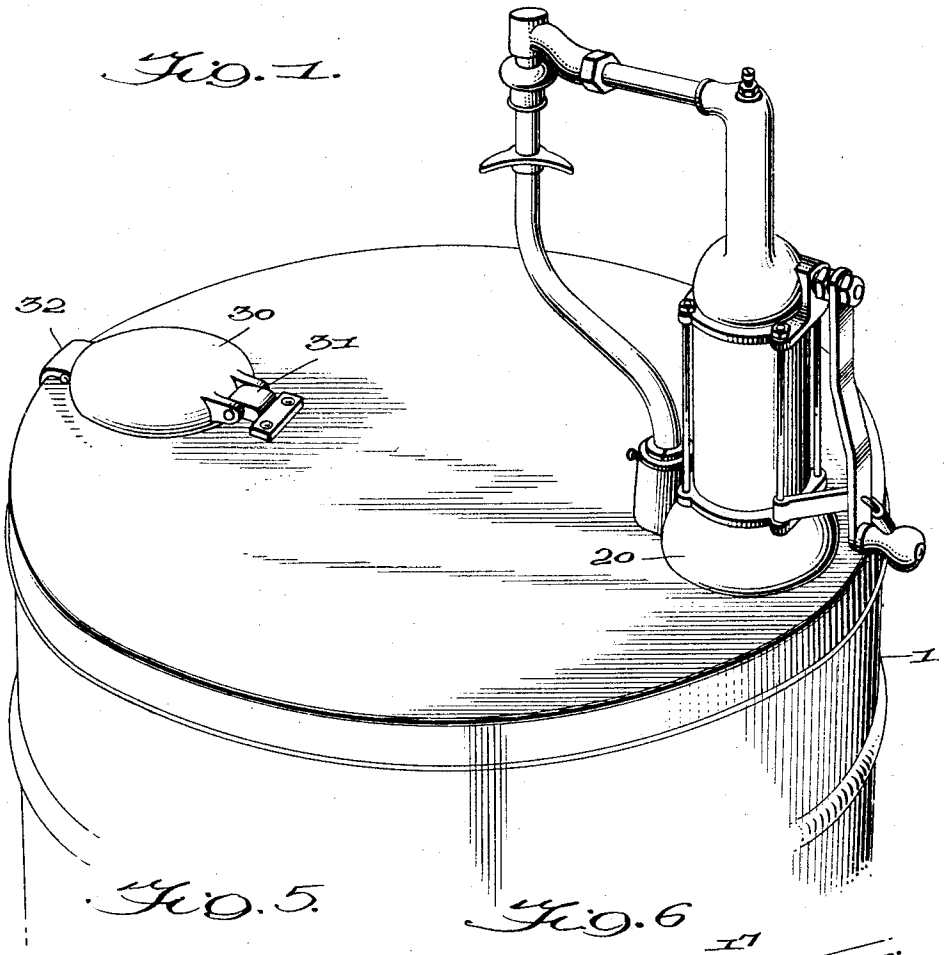


Fig. 5.

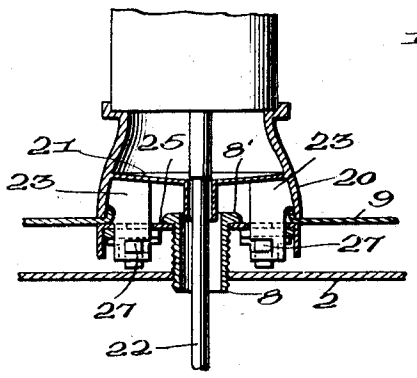
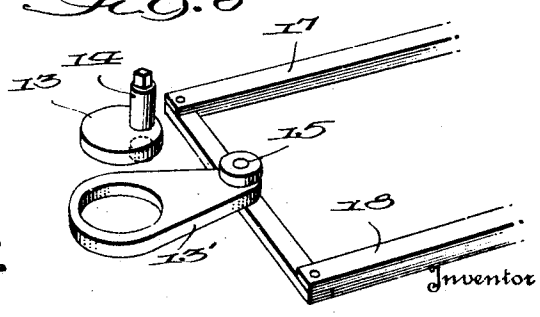


Fig. 6



Inventor

Richard E. Nest,

By A. P. Burns

Attorney

Oct. 25, 1932. R. E. NEST 1,884,134

DISPENSING APPARATUS FOR LUBRICATING CILS

Filed June 23, 1931 3 Sheets-Sheet 2

Fig. 3.

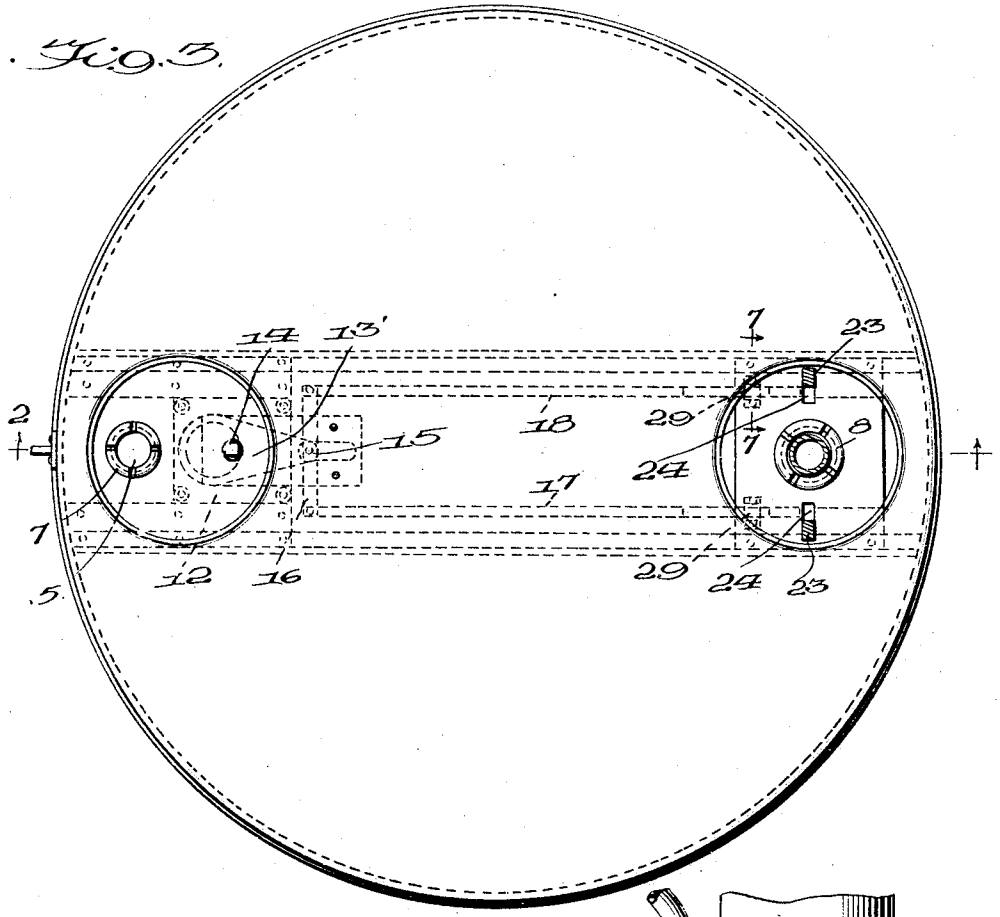


Fig. 2.

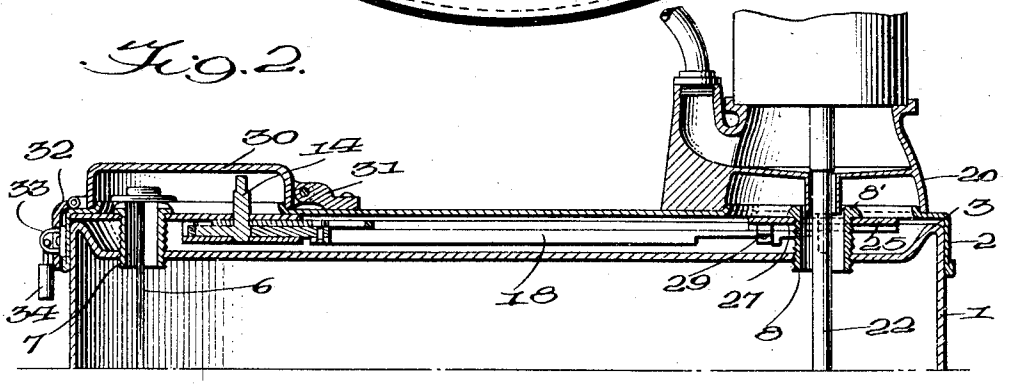
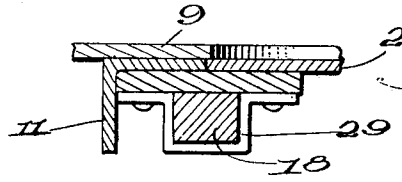


Fig. 7.



Inventor

Richard E. Nest,

By

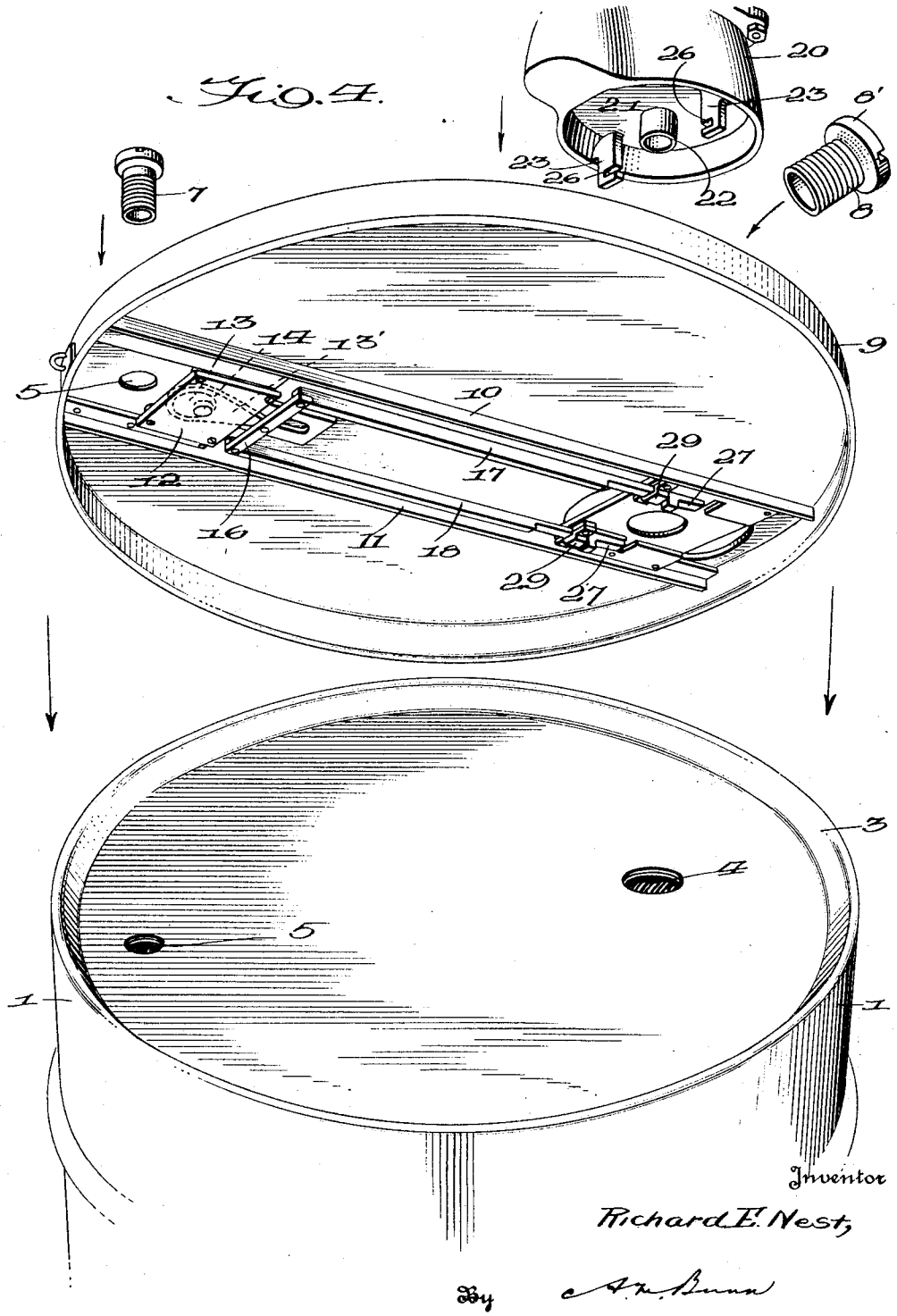
Attorney

Oct. 25, 1932. R. E. NEST 1,884,134

DISPENSING APPARATUS FOR LUBRICATING OILS

Filed June 23, 1931 3 Sheets-Sheet 3

Fig. 4.



Inventor

Richard E. Nest,

By A. E. Bunn

Attorney

Patented Oct. 25, 1932 1,884,134

UNITED STATES PATENT OFFICE

RICHARD E. NEST, OF TAKOMA PARK, MARYLAND

DISPENSING APPARATUS FOR LUBRICATING OILS

Application filed June 23, 1931. Serial No. 546,384.

This invention relates generally to apparatus for dispensing lubricating oils, and more particularly to means adapted for operative application to an oil-containing drum, whereby to prevent the seepage of water into the interior thereof.

It is customary for the oil dealers to deliver oil to retailers in large drums having an inlet aperture into which the barrel of the pump may be screwed, but it is a known fact that the top of the drum is relatively thin, and not adapted to take enough screw-threads to permit the barrel to be so screwed into the head as to impart the rigidity necessary to the operation of the pump. In addition thereto the drum head is so thin, and relatively flexible, that the pump cannot be securely fixed in position, and operation of the pump handle constantly tends to disrupt the screw-thread connection between the drum head and the pump barrel, so that the latter soon wears out the threads in the head and becomes loosened therefrom, resulting in a wabbling motion of the pump whenever it is used. Such motion obviously tends to accelerate disruption of the screw threads in the aperture, and, since the drums are usually or oftentimes exposed to the elements, water and dirt will pass between the pump barrel and the wall defining said aperture, and the oil in the drum will soon become contaminated.

The head of an oil drum is usually positioned at least one inch below the upper periphery of the drum sides, forming a basin adapted to catch water and dirt, and the primary object of the invention is the provision of means for positively preventing the seepage of water and dirt past the barrel of the pump and into the drum. In the accomplishment of this object, I provide means for stiffening the drum head to minimize lateral movement of the pump, and also means for preventing access of refuse to the aperture which receives the pump barrel.

Other objects of the invention will be made apparent in the following specifications, when read in connection with the drawings forming a part thereof.

In said drawings:—

Fig. 1 is a perspective view of the device as applied to the top of a steel oil barrel or drum.

Fig. 2 is a vertical section taken on the line 1—1 of Fig. 3.

Fig. 3 is a top plan view of a cover plate forming part of my invention.

Fig. 4 is a disassembled perspective view showing the top of a drum, the bottom of the cover for the drum head, the lower portion of the pump, and the castellated nipples which are screwed into apertures formed in the drum head.

Fig. 5 is a vertical section on the line 2—2, of Fig. 3.

Fig. 6 is a perspective view of the operating cam and differentiating locking lever, and,

Fig. 7 is a section on line 7—7 of Fig. 3.

Now referring specifically to the drawings in which like reference numerals indicate like parts throughout the several views, and referring first to Fig. 4, the numeral 1 indicates a metallic drum or barrel, having a top or head 2, positioned in a plane located slightly below the top periphery 3 of the sides of the drum. The drum head 2 is provided on one side with an aperture 4, adapted for the reception of the barrel of the pump, and with a smaller aperture 5 on the other side, for the reception of a gage-stick 6, best shown in Fig. 2. The walls defining such apertures are provided with screw threads adapted to retain castellated nipples 7 and 8, respectively.

A dish-shaped cover 9, best illustrated in Fig. 4, is formed of a size and shape adapting it for a close fit over and around the upper periphery 3 of the sides of the drum. The underside of said cover is reinforced by metallic angle-rails 10, 11, extending transversely and centrally across the inner face of the cover, said rails being rigidly secured in position by screws, rivets, or by a spot welding process.

Resting upon and secured to the horizontal rails 10, 11, near the front ends, is a plate 12, and an eccentric 13 is mounted on said plate, and is rotatable by means of a vertical shaft

14 having a top adapted for a suitable wrench or a removable handle. As indicated in Fig. 6, the eccentric is rotatably positioned in an aperture formed in the end of a link 13′, the other end of the link being pivotally connected at 15 to the front rail 16 of a rectangularly-shaped frame having side rails 17 and 18, adapted for longitudinal reciprocation in either direction, under suitable rotation of the cam 13, the rails 17 and 18 being guided by strap members 29, 29 one for each rail. The front end of each of the rails 17 and 18 is pivotally connected to the front rail 16, whereby to permit a differential movement of the rails, and the extreme end portion of each of the rails 17 and 18 is beveled to wedge-shaped form, for a purpose to be later referred to.

As best indicated in Fig. 2, the cover 9 is apertured concentrically with the aperture 4 in the drum head 2, to permit the reception of the pump barrel. The pump is best illustrated in Figs. 1, 2 and 4 and may be of standard design except as modified as herein disclosed. The lower portion of the pump is constructed to form a bell 20, having a transversely extending, interior partition 21, through which the pump barrel 22 extends. On the inner face of the wall of the pump bell 20, I provide two diametrically opposed downwardly-directed locking tongues 23, 23 extending substantially below the periphery of the bell, and through slotted openings 24, 24, formed in plates 25, 25, one mounted on each of the rails 17 and 18. The inner face of each of the tongues 23 is notched at 26, for a purpose to be later referred to.

In installing the pump the bell 20 is so placed that the pump barrel 22 extends downwardly through the castellated nipple 8 and into the oil supply. In this operation the tongues 23, 23 pass downwardly through the openings 24, 24, one on each side, and the notches 26, 26, on the tongues 23, 23, are in alignment with the wedge-shaped ends 27, 27 of the rails 17 and 18. In this position the shaft 14 of the eccentric 13 is rotated to push the rail 16 inwardly towards the pump through the medium of the link 13′, and this operation serves to project the wedge-shaped ends 27, 27 into the notches 26, 26, carried by the tongues 23, 23, thereby firmly locking the pump in position.

The rails 17 and 18 are pivotally connected at 28, 28 to the rail 16, and a differential movement of the rails is possible because of this construction. Obviously, rotation of the shaft 14 to project the rails 17 and 18 towards the pump will cause said rails to slide, in the guideways 29, towards the pump but, in case one of the rails meets undue friction, the rail 16 will pivot and continue to move towards the pump under continued rotation of the cam, until each of the ends 27, 27, is forced into its notch 26 in the tongues 23, 23, and, even though one of the ends 27 were not so far advanced as its mate, the pump would be securely retained in position.

To prevent any unauthorized unlocking of the pump, or any undesirable access to the aperture 5, containing the gage stick 6, I provide a protective lid 30, for the aperture 5 containing the castellated nut 7. The lid 30 is hinged to a bracket 31, welded or riveted to the top of the cover 9, and extends over the shaft 14 which controls the locking and unlocking devices for the pump, as hereinbefore set forth. The front end of the lid 30 carries a hasp 32, which extends over a staple 33 adapted to a lock 34.

As will be noted from an inspection of Fig. 2, that portion of the periphery of the head of the cover 9 which defines the aperture 4, is flared upwardly to form a guard to prevent the passage of water and dirt under the hood and into the oil in the drum. In addition to this safe-guard it may be stated that the eccentric 13 may be so forcibly operated that the wedge-shaped ends 27, 27, will exert a very heavy downward thrust on the tongues 23, 23, carried by the hood 20, and greatly minimize any chance of water or dirt passing under the lower rim of the latter, since the downward thrust referred to tends to press the lower periphery of the hood tightly against the top of the cover, as will be understood.

In the operation of the device, with the instrumentalities arranged as described, and as indicated by dotted lines in Fig. 3, the pump is merely placed in position as illustrated in Fig. 2, and rotation of the shaft 14 in the proper direction serves to project the wedge-shaped ends 27, 27, into the aligned notches 26, 26, in the tongues 23, 23, the wedges tightly pushing the periphery of the bell 20 downward onto the cover 9. Manifestly, rotation of the shaft 14 in an opposite direction will release the tongues 23, 23.

From the foregoing it will be manifest that I have provided an improved means for increasing the rigidity of the pump supporting member for oil-vending pumps, and for detachably securing the pump firmly in position, while at the same time providing instrumentalities preventing unauthorized operation of the pump locking mechanism, and additional mechanism and means to prevent contamination of the oil in the drum.

Modifications of the structure herein described may be suggested to those skilled in the art, but my invention covers all embodiments falling fairly within the scope of the appended claims.

What I claim is:—

1. An oil drum or barrel having a cover extending over the head thereof, a pump positioned on said cover and having tongues projecting therethrough, parallel locking bolts slidable in tracks on the bottom of said

cover, and means for differentially moving said bolts into operative or inoperative position, said means comprising a front rail pivotally secured to the rear end of each bolt, and an eccentric adapted for operation to move said rail forwardly or rearwardly.

2. An oil drum or barrel having a cover extending over the head thereof, a pump seated on the cover and having its barrel extended into said drum, said pump being provided with locking tongues extending downwardly therethrough, reciprocable locking bolts on said cover having wedge-shaped ends adapted for locking engagement with said tongues, whereby to cause the pump to tightly seat upon said cover, and means for reciprocating said bolts to operative or inoperative position.

3. An oil drum or barrel having a cover extending over the head thereof, a pump having its barrel extended into said drum, means operable to lock the pump to the cover, or to release it therefrom, including a rotative shaft controlling said means, a cover plate covering said shaft, and means for locking said plate in position.

4. An oil drum having a cover adapted to fit over the head thereof, and castellated nipples supported by the cover and operatively engaging said head, whereby to connect the head and cover each to each.

5. An oil drum or barrel having a cover adapted to fit over the head thereof, a pump adapted to be detachably secured to a seat upon the cover, means on the lower face of the cover adapted for actuation to lock the pump in operative position or to release said pump therefrom, and a rotative shaft extending downwardly through the cover and operatively connected to said locking means.

6. An oil drum or barrel having a cover adapted to fit over the head thereof, a pump adapted to be detachably secured to a seat upon the cover, means on the lower face of the cover adapted for actuation to lock the pump in operative position or to release it from locked position, a shaft extending downwardly through the cover and connected to said locking means, a lid extending over said shaft, and means for securing said lid in locked position.

In testimony whereof I affix my signature.

RICHARD E. NEST.