

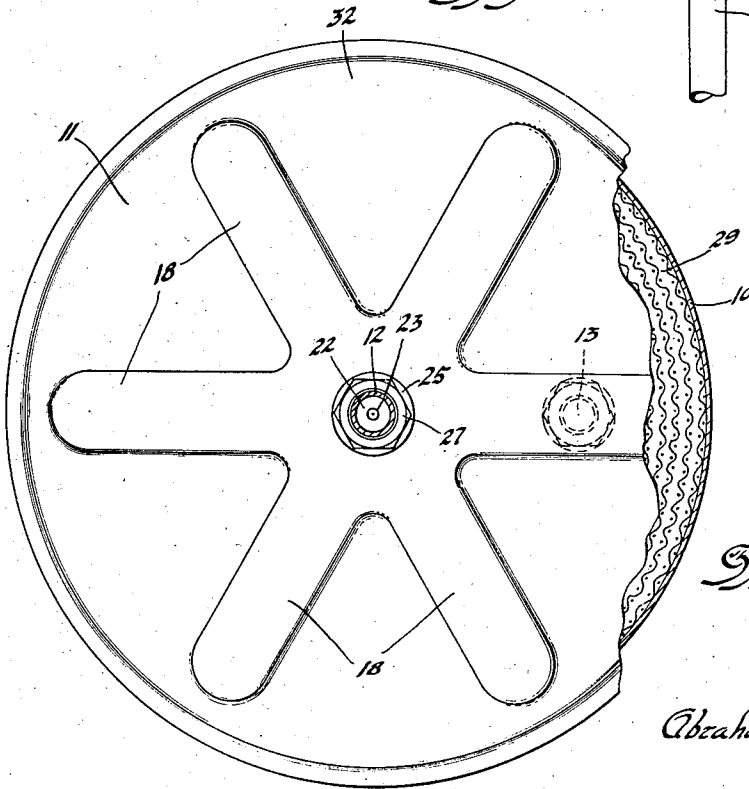
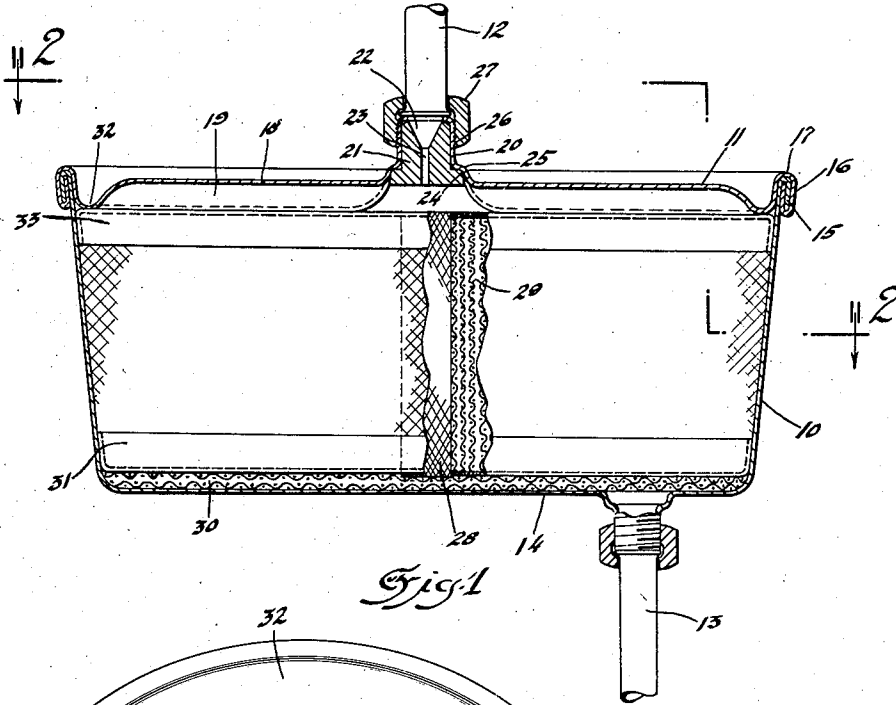
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OIL FILTER

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OIL FILTER

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This invention relates to oil filters particularly to filters used on automotive vehicles.

The object of this invention is to construct an improved oil filter and I accordingly provide a tapered cup shaped container having a ribbed cover, the ribs forming oil grooves. An inlet port is provided in the cover and an outlet port at the bottom of the container, the enclosed space being filled with a suitable filtering material preferably a burlap roll. The burlap roll is placed over a cocoanut matting disc with a canton flannel disc interposed therebetween, the nap of the latter being directed toward the bottom of the container. A cloth overlies the burlap.

The axial center of the filter is taken up by a cord or rope core, preferably of manila or cocoanut rope. The contaminated oil enters the opening in the filter cover and in turn passes thru the burlap roll, the flannel disc, and the matting and arrives at the outlet opening freed from foreign material and is once more ready to be used on the engine.

The invention is disclosed in the accompanying drawing in which:

Figure 1 is a transverse section thru the oil filter.

Figure 2 is a view taken on the line 2—2 of Figure 1.

Referring to the numbered parts on the drawing 10 indicates the tapered container of the filter, 11 the cover, 12 the inlet pipe which passes thru the center of the cover, and 13 the outlet pipe placed at the bottom 14 of the filter eccentrically to the inlet pipe 12. The container 10 is tapered and has the cover 11 permanently secured thereto. The means for securing the cover is disclosed in Figure 1 where the container 10 is shown as having a flange 15 at its upper border and the cover 11 as having a flange 16, return bent as at 17 around the flange 15 and both flanges 15 and 16 in turn downwardly bent so that in their final position they are parallel to the container 10.

The main plane of the cover is below the level of the container sides as shown at 32 and is provided with a plurality of radial ribs 18, preferably six in number, forming grooves 19 which permit the oil to pass from

the center of the filter out over the filtering material.

The center of the cover 11 has a short up-standing housing 20 for the reception of a plug 21 having a conical shaped opening 22 at its upper end and a smaller restricted opening 23 at its lower end, the purpose of which is to limit the amount of oil which will pass thru the filter. A shoulder 24 on the lower end of the plug 21 abuts against a corresponding shoulder 25 pressed in the cover. The upper portion of housing 20 is screw threaded as at 26, for the reception of a nut 27 which holds the inlet pipe 12 securely to the filter. A housing, similar to the housing 20, is provided at the outlet 13 of the filter.

The filtering material per se is composed of a central core 28 composed preferably of manila or cocoanut rope and surrounding this rope there is a burlap roll 29 occupying the space from the core to the sides of the container 10. For the roll 29 burlap is to be preferred although other material may be used. On the bottom of the container there is placed a disc 30, preferably of heavy cocoanut matting and between the disc 30 and the burlap roll 29 there is disposed a cloth 31, preferably a canton flannel disc, the nap of which is directed toward the bottom and the edges of which are turned to overlap the roll 29. Over the burlap roll and immediately below the cover 11 there is placed a cloth 33, preferably of canton flannel with the nap toward the burlap and having its edges turned to overlap the roll 29. The purpose of this flannel disc 33 is to give a more even distribution of oil over the filter.

Operation of the filter is as follows: The oil will enter at the inlet pipe 12 and pass along the grooves 19 over and through the upper flannel disc 33, to the upper edge of the burlap roll 29. The oil will seep thru the burlap roll onto and through the lower flannel disc 31, thru the cocoanut matting to the outlet pipe 13, from where it again passes to the working parts of the engine.

I claim:

1. In an oil filter, a container for a filtering material, a cover secured to said con-

- tainer, and a plurality of integral ribs pressed in said cover forming oil channels.
2. The combination of claim 1, said cover having an opening, and a plug having a port secured in said opening. 70
3. The combination of claim 1, an outwardly directed housing on said cover, and a plug having a port secured in said housing.
4. The combination of claim 1, said ribs radiating centrally from the cover, a housing at the cover center, and a ported plug secured in said housing. 75
5. In an oil filter, a container for a filtering material, a cover secured to said container, an inlet in said container, a plug secured in said inlet, a restricted port in said plug, and a plurality of ribs forming oil grooves on said cover, said port feeding the oil to said grooves. 80
6. In an oil filter, a container, a cover secured to said container, a filtering medium in said container, said filtering medium comprising a fabric roll, a plurality of cloths adjacent said roll, and a matting adjacent one of said cloths. 85
7. The combination of claim 6, said matting, cloths and fabric comprising a heavy cocanut matting, canton flannel, and burlap, respectively.
8. The combination of claim 6, and a cord center for said filtering medium. 90
9. The combination of claim 6, said matting lying on the bottom of the container, a cloth over the matting, said fabric roll over the cloth, and a second cloth over the roll. 95
10. The combination of claim 6, and an inlet port in said cover over said fabric, and an outlet port in the bottom of said container beneath said matting. 100
11. In an oil filter, a container, a cover for said container, a filtering medium in said container comprising a central core of rope, a burlap fabric wrapped in roll formation about said core, cloth discs over and under said fabric having their naps on the underside, and a matting disc under said lower cloth. 105
12. In an oil filter, a container for a filtering material, a cover secured to said container, and a plurality of ribs on said cover forming oil channels and extending radially from the center of the cover. 110
13. In a filter, a container, a closure for one end of container, a liquid passage in the closure comprising a housing portion projecting from the plane of the closure, a plug secured in said housing, a delivery pipe, and means for securing the pipe to said housing. 115
14. The invention of claim 13, said plug having a restricted passage. 120
15. In a filter, a container, a filtering medium in said container including a matting, a roll adjacent said matting, and a cloth over said roll, and a cover for said container. 125
16. In a filter, a container, inlet and outlet means therefor, a filtering material placed on edge in said container, a cloth over the edges of the material at the inlet side of the filter, and a plurality of ribs at the inlet side of said filter to deliver the fluid to be filtered over the cloth. 130
17. In a filter, a container, inlet and outlet means therefor, a filtering material placed on edge in said container, a cloth over the edges of the material at the inlet side of the filter, and a cord center for said filtering material. 135
- In testimony whereof I affix my signature.
ABRAHAM M. BABITCH. 140