

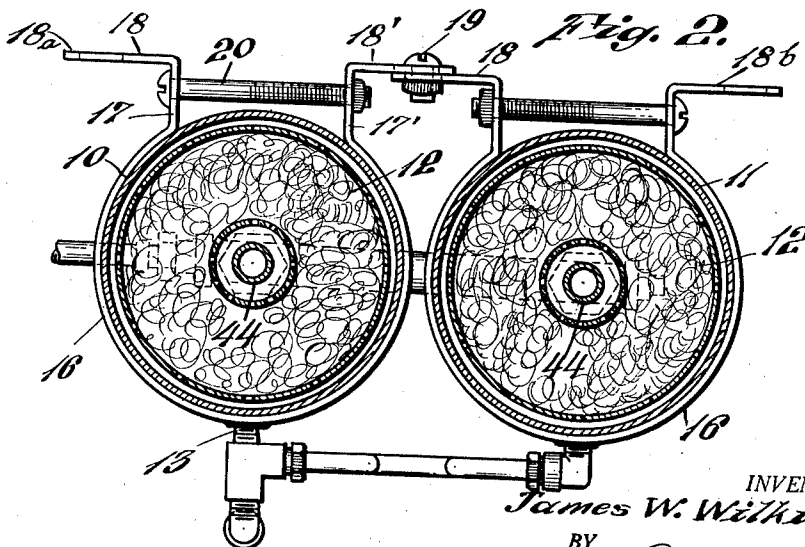
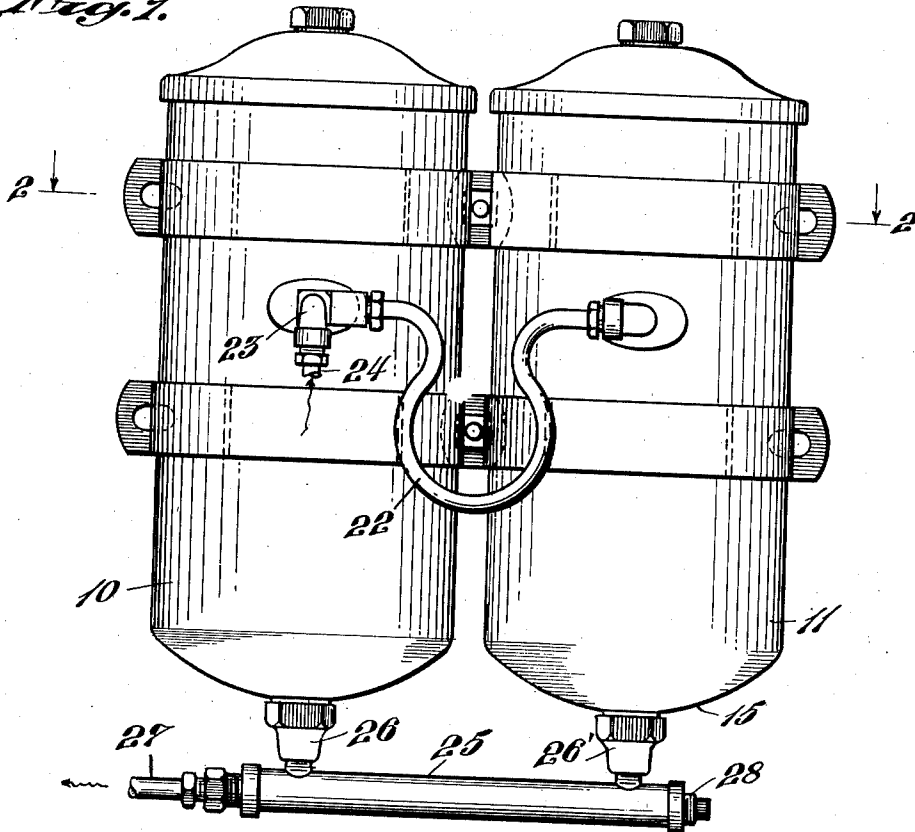
April 8, 1941.

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DOUBLE MOUNTED FILTER

2,238,003

Filed Jan. 27, 1938

*Fig. 1.*



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## UNITED STATES PATENT OFFICE

2,238,003

## DOUBLE MOUNTED FILTER

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Application January 27, 1938, Serial No. 187,112

3 Claims. (Cl. 210—62)

This invention relates to an oil filter of the type used for the cleaning of internal combustion engine lubricating oil from solid matter and other objectionable qualities while in circulation and the engine in operation; and has for one of its objects the provision of an arrangement whereby a large capacity for filtration of the oil is provided for large or heavy duty motors.

Another object of the invention is the arrangement of a plurality of filters which may be used either individually or in a gang where all operate in a similar manner and in such relation that one may pass oil independently of the other should such occasion require.

Another object of the invention is the utilization of the brackets which are used for mounting individual filters for attaching the individual units in such a way that a plurality of prior individual units may be used as a single gang unit for the purpose of increased capacity of the filter.

Another object of the invention is to provide a conduit between the individual units which will steady the units at one connection and permit of some movement by another of the connections of the parts together.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing:

Fig. 1 is an elevation showing two heretofore individual units connected together as a single unit;

Fig. 2 is a sectional view on substantially line 2—2 of Fig. 1.

It frequently occurs that the user of a fleet of automobiles or trucks has some automobiles or trucks which have relatively light duty motors, whereas others have large heavy duty motors; and in order that such user may standardize upon a single size filter cartridge for use in all of the trucks whether of heavy or light duty motor type, I have arranged to provide the individual filter units in gangs, one of which units may be used for a light duty motor and a plurality of such units utilized for the heavier type motor, and I have done so by a simple arrangement of connecting the brackets, ordinarily used for mounting one filter on the automobile, to provide by such connection a single gang unit of a plurality of such units; and I have connected the units in parallel relationship so that oil may enter any one of the units without passing through the other unit. In this way the passage of oil through

the filter is materially increased and the capacity of the filter is increased while using the same size filter cartridges; and the following is a more detailed description of the present embodiment of this invention, illustrating the preferred means by which these advantageous results may be accomplished:

With reference to the drawing, 10 designates one filter casing and 11 another filter casing, each of which contains a cartridge 12 of filter material and each of which is arranged to receive oil through the cartridge and discharge it through a central tube 14 out through the curved bottom wall 15 of the casing in a manner which I have described in more detail in some of my previous applications, such for instance as Serial No. 168,129, filed October 9, 1937.

Each of these casings 10, 11 is ordinarily mounted by the provision of a band bracket 16 embracing the cylindrical casing 10 or 11 and then extending outwardly from the casing as at 17 to be bent to provide flanges 18, 18' for attachment to the dash of a motor vehicle or the like. When used individually some conduit is provided to the inlet opening 13 and some conduit provided from the outlet opening 14 in the lower wall 15.

In order that these individual units may be assembled to provide a single unit of larger capacity, I have bolted the flanges 18' and 18 of the band brackets together by a bolt 19 and secured the bands in firm relation about each of its cylindrical casings by a bolt 20 across the portion 17 and 17' of the brackets. By this arrangement the number of casings assembled may be multiplied at will and when as many are assembled as desired they may be bolted to the dash or other support by the outer flanges which I will now designate as 18a and 18b.

In order to connect the entrance openings in parallel I have provided a tube 22 having a long arcuate bend to provide some flexibility of the conduit between the inlet openings with an L-shaped or T-shaped fitting 23 as occasion may require, so that any oil entering from the conduit 24 may pass either into the casing 10 or through the tube 22 and into the casing 11. For discharge from the casings I have provided a header 25 extending along the required length which has connections 26 and 26' to the bottom walls of each of the casings so as to connect the central tube 14 thereof to the header. The discharge conduit pipe 27 extends from the header at one end while it is plugged up as at 28 at the other end to cause the passage of oil in the de-

sired direction. Thus, both inlet and discharge conduits are connected in parallel relationship with the casings.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. In combination, a plurality of filter units each comprising a casing containing filtering material, a flexible conduit connector between the inlets of said units, a rigid header connecting the outlet ends of said casings together for providing a common outlet passage for said units, a supporting bracket for each unit, each bracket provided with spaced attaching flanges, one flange on one of the brackets being located opposite and facing an adjacent flange on the other bracket to overlap the same when the casings are positioned side by side to permit such opposed flanges to be joined together, means to locate and secure together the adjacent flanges of the brackets of said filter units to hold said filter units in assembled relation, and means on the other free unconnected flanges of said brackets when thus assembled for attaching the assembled units to a support.

2. In combination, a plurality of filter units arranged side by side each comprising a casing containing filtering material therein, common inlet and outlet conduit connections between said units, a support or bracket for supporting each filter unit and comprising a band around the outside of the casing thereof, the opposite end portions of said band extending outwardly from the casing and bent in opposite directions to provide flanges for supporting the casing when

the band is clamped thereto, one of said flanges on one of the casings being located opposite and facing a flange on the adjacent casing when the casings are positioned side by side to permit said oppositely disposed flanges to be secured together, clamping means securing the bands to the casings, and means securing together said adjacent opposed flanges of the bands to provide a rigid unitary filter assembly, the free unconnected flanges of the bands being adapted for attachment of the entire filter assembly to a support.

3. In combination, a plurality of filter units arranged side by side in a substantially upright position, each comprising a cylindrical casing containing filtering material therein, a flexible conduit connector extending between and connecting together the inlets of said units, a rigid header connecting together the outlets of said casings for providing a common outlet for said units, a support or bracket for supporting each filter unit and comprising a band around the outside of the casing thereof, the opposite end portions of said band extending outwardly from the casing in opposite directions to form flanges for supporting the casing when the band is secured thereto, one of said flanges on one of the casings being located opposite and facing an adjacent flange on the next casing when the casings are positioned side by side to permit said oppositely disposed flanges to be secured together, means detachably securing the bands to the casings, and means securing together said adjacent opposed flanges of the bands of the filter units to provide a rigid unitary filter assembly, the free unconnected flanges of the bands around said units when thus assembled having openings for receiving suitable fastening members by which the entire filter assembly may be secured to a support.

JAMES W. WILKINSON.