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2,368,145

GASOLINE STATION PUMP NOZZLE STRAINER

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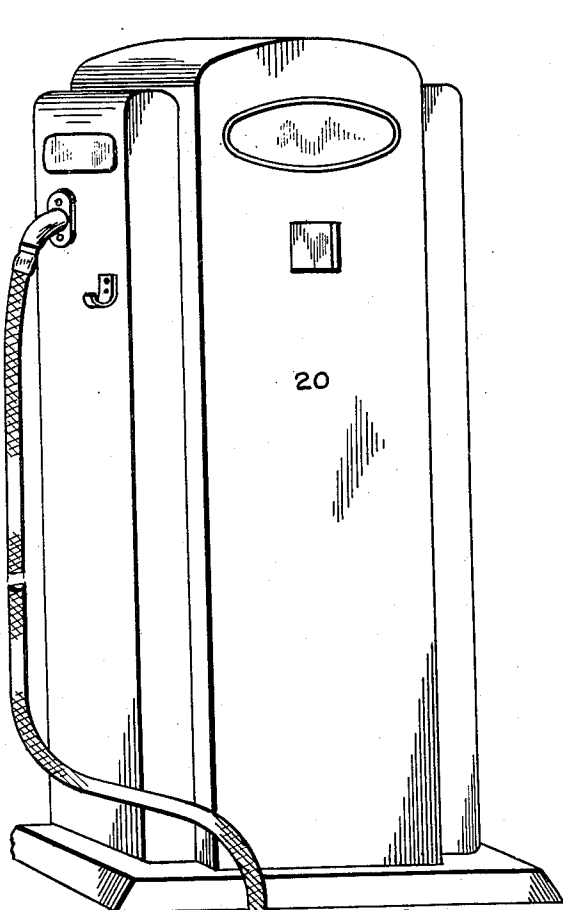


Fig-1

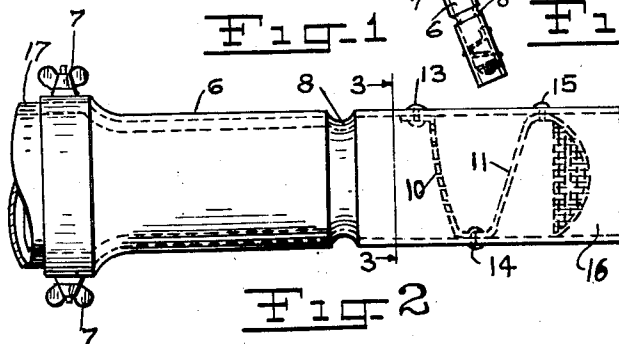


Fig-2

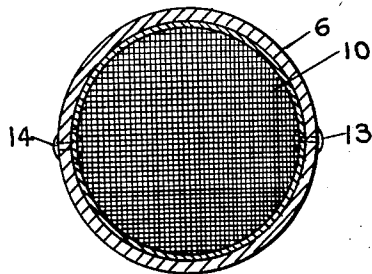


Fig-3

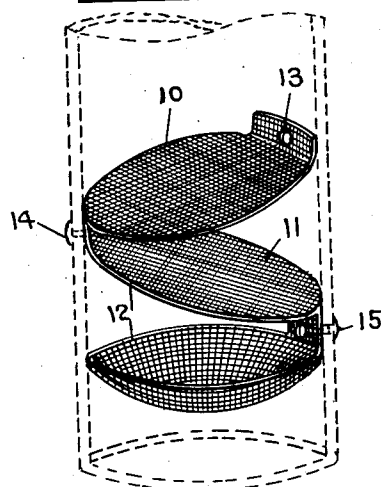


Fig-4

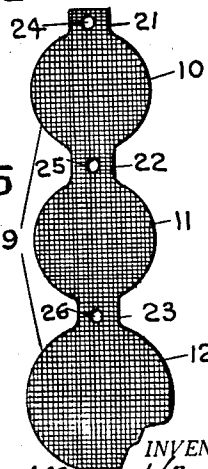


Fig-5

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GASOLINE STATION PUMP NOZZLE
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1 Claim. (Cl. 210-170)

Our invention relates to an improvement in a gasoline station pump nozzle strainer and the novelty consists in the adaptation and arrangement of parts as will be more fully hereinafter pointed out.

It always has been and still is a serious problem to finally deliver gasoline to the tank of an airplane or automobile and be positive that it is free from dirt particles or sediment which may prove vital to the operation of the carburetor and motor as these are always getting in by accident or forming therein.

Our device solves this problem and insures absolute freedom from foreign matter and sediment going into the tank and hence into the carburetor of an airplane or an automobile and is particularly adapted to the solution of this problem as it is adapted to be fitted onto any gasoline station pump nozzle, be it on the road or at an aviation field.

Referring to the drawing,

Fig. 1 is an elevation of the usual gasoline filling station pump showing the pipe and nozzle connection;

Fig. 2 is a side elevation of our strainer device, a portion being broken away at one end for convenience in illustration and the strainer portion being shown in vertical section in order to show the interior construction;

Fig. 3 is a top plan view of the strainer section on the line 3-3 of Fig. 2;

Fig. 4 is a view of the outer end of our strainer with the tube portion cut away in order to show the interior strainer construction;

Fig. 5 is a top plan view of the complete single piece strainer.

In the drawing, our tubular strainer member 6 has thumb set screws 7 mounted in the inner end which are adapted to be fastened into position to hold the tubular member 6 on the delivery end of the usual gasoline pump nozzle 17.

The tubular member 6 has a circular depressed portion 8 which is readily formed in the comparatively light metal tubular member 6 so that 8 will form a circular rim inside of the tubular member 6 to act as a stop member against the outer end of the nozzle member 17.

A strainer element 9 of a single piece of very fine brass wire mesh or other suitable wire mesh material is stamped into circular strainer members 10, 11 and a circular cup member 12 having tab members 21, 22 and 23 with circular holes 24, 25 and 26 therein and soft metal rivets 13, 14, 15 are adapted to be mounted through holes in the tubular member 6 and through holes 24, 25,

26 in that order and hammered down rigidly in position in the usual well known manner so that 10 and 11 are mounted at opposite angles across the entire opening of tubular member 6.

5 This, it will be seen, is entirely practical where 13 is first placed in position and hammered down and then 14 and 15.

It will also be noted that the cup member 12 fits the inner tubular member 6 so snugly that 10 there is no need of any additional fastening other than at 15.

In mounting our strainer device 6 on the end of a nozzle 17 connected with the filling hose 19 and the usual gasoline pump 20 the strainer device will serve to strain all gasoline leaving the pump through the nozzle 17 which has the usual handle device 18 so that the foreign substances which may have gotten into the gasoline at any time up to this final delivery for actual use in a motor or any sediment which may have formed in the blended gasolines which are so commonly in use will be strained out as they pass first through the two straining elements 10 and 11 mounted at opposite angles and then through 20 cup 12, so that when one element does not catch the particles of dirt another straining element will because of the different angles at which said particles may catch in the strainer mesh.

It is to be particularly noted that the final straining element 12 is a cup member formed of the same fine wire mesh being integral with the members 11 and 10 but having the advantage of its sloping sides to retain and catch particles which have not been caught in 10 and 11 at their 25 particular angles.

It is also pointed out that the strainer elements 10, 11 and 12 constituting the complete unit 9 may be removed if they become worn or injured in any way by the cutting of the soft metal rivets 13, 14, 15 and placing a new strainer 9 in the same place and replacing the rivets 13, 14, 15, as above described.

It will be noted that the strainer element 9 and particularly the lower cup member 12 are properly housed and spaced by the space 16 from the outer end of the tubular member 6 so as to be protected against any injury to the strainer elements 12, 11, 10.

While there may be many strainer elements 50 used in the handling of gasoline through its various steps of transfer from the refinery, there is nothing which takes the place of the final straining of the gasoline to insure that nothing by way of foreign substance or sediment goes with the gasoline into the tank of an airplane or auto-

mobile to cause ultimate blocking of the fine nozzles of the carburetors and dangerous stopping of the motor at a time when it will cause accidents. The combination of our readily adjustable strainer to the end of the usual gas filling station nozzle is vital to the insurance of absolute freedom from foreign substance or sediment in the gasoline fed into airplanes or automobiles.

It is also to be noted that by loosening the set screw 7 and sliding the tubular member 6 10 off of the nozzle the dirt collected in the screens 10, 11, 12 can be washed out very readily by the running of a stream through the tubular member 6 countercurrent to the regular way by starting the stream back through the outlet end of the nozzle 6 at 16 so that the life and efficiency of the strainer 6 may be thus readily extended and improved.

It is finally to be noted that our strainer device is readily and quickly adjusted to and fastened in position on any gasoline pump nozzle so that if the strainer 6 clogs up a new strainer 6 can readily be mounted in position as these devices are inexpensive to manufacture and can always be maintained at slight expense in quantities for replacing where they become clogged or defective in any way so that the operator of the pump can always be sure that gasoline being delivered has an effective and efficient strainer mounted and operating in the hose on the end of 30 the nozzles.

What we claim is:

In a gasoline pump nozzle strainer, the combination of a tubular member adapted to fit over and be secured in fixed position on the open end of a gasoline pump nozzle, manually operated clamping means on said tubular member for effecting said clamping, a stop formed from said tubular member on the inside for limiting the insertion of said nozzle into said tubular member and a single piece strainer member secured within said tubular member and formed of two flat members and a cup member, all three of said strainer members having their outer peripheries contacting the inner surface of the tubular member and being integral with each other and connected by tabs with one flat member positioned at an inclination to the horizontal axis of the tubular member in proximity to the mouth of the nozzle, the second flat member being secured 20 to the first flat member and positioned at an opposite inclination to the axis of the tube, and spaced from the first member and the cup member being secured to the second flat member and positioned horizontally to the tubular member 25 and adjacent the outlet end thereof, and spaced from the second flat member.

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