W. H. FINIGAN.

STRAINER.

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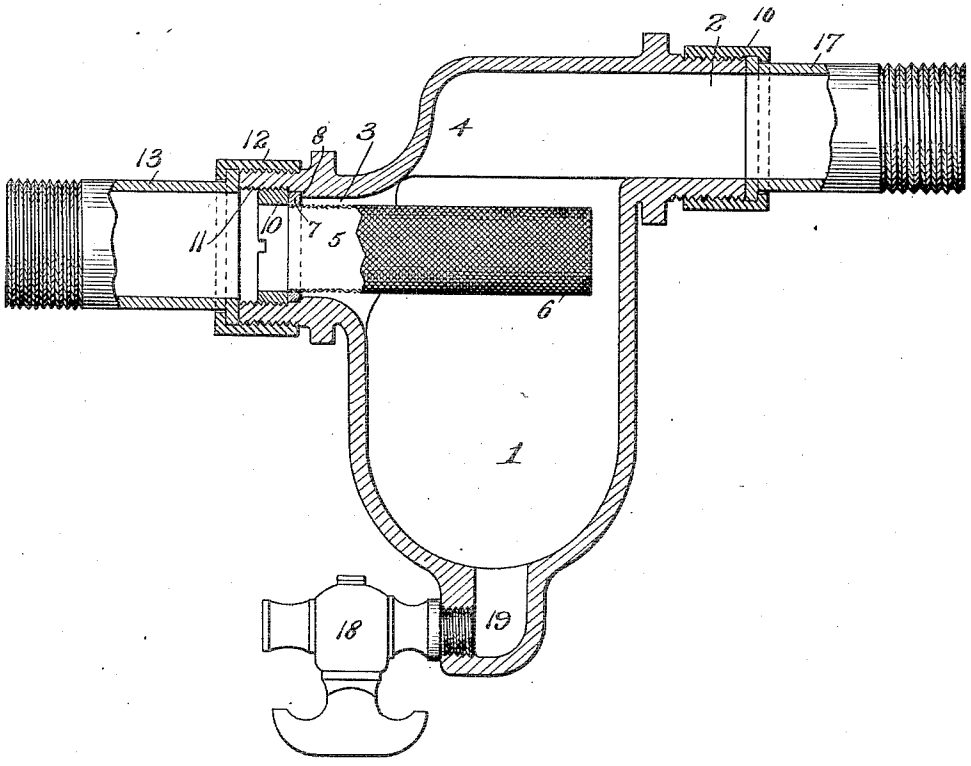
1,071,306. Patented Aug. 26, 1913.



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UNITED STATES PATENT OFFICE.

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STRAINER.

1,071,306. Specification of Letters Patent. Patented Aug. 26, 1913.

Application filed October 15, 1910. Serial No 587,167.

To all whom it may concern:

Be it known that I, WILLIAM H. FINIGAN, a citizen of the United States, residing at Sharon Hill, county of Delaware, and State of Pennsylvania, have invented certain new and useful Improvements in Strainers, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to strainers for the principal purpose of straining gasolene and similar fluids during the flow or passage thereof from one pipe to another, or one receptacle to another.

Commercial gasolene contains both dirt and water, both of which it is important to remove, and this can be expeditiously effected by means located in the pipe or passage through which the gasolene is supplied. Such a strainer must be entirely effective to remove the dirt and water, however, or else it is obviously useless; a little water is nearly as objectionable as a considerable quantity, and the same is true of the dirt.

It is the main object of my invention to provide a strainer adapted to satisfy the foregoing requirements.

The drawing illustrates in vertical section a strainer constructed to embody the invention.

Referring to the drawing, 1 denotes a receptacle of inverted dome-shape, having an inlet passage 2 and an outlet passage 3. The inlet pipe is above the level of the outlet pipe and it is characteristic of the arrangement that the two pipes are not in the same direct alinement so as to permit a straight flow from one to the other. On the contrary, a baffle-plate or surface 4 is so located with respect to the inlet pipe as to direct the flow away from the outlet pipe and into the cavity or chamber of the receptacle 1. In practice, the two pipes are arranged with their axes in the same vertical planes and parallel with one another and spaced apart a distance at least equal to the bore of the pipes. The baffle-plate is conveniently provided by a curved wall 4 of the chamber or receptacle 1 and preferably located somewhat beyond the vertical center thereof.

5 denotes the filter having several distinguishing characteristics. The filter is removable and inserted through the opening of the outlet passage and consists, as illustrated, of an elongated cup-shaped sieve 6 with a flanged-neck 7 received in an annular recess 8 of the outlet opening.

10 denotes a screw ring received in a threaded portion 11 of the outlet opening and adapted to clamp upon and hold the said sieve 6 in its proper place.

12 denotes a coupling by which the delivery pipe 13 is secured to the body of the strainer. This connection permits the removal of the delivery pipe and removal of the sieve whenever desired.

16 denotes a similar coupling for the inlet pipe 17.

18 designates a cock, opening into a small cavity 19 at the bottom of the chamber 1, and through which water and dirt collected by the strainer may be drawn off or expelled.

The operation is as follows: Gasolene enters through the inlet pipe 17 and the stream or column is broken or deflected by the baffle-plate 4. In this way the force due to its velocity is lost and it spreads and flows downward over the strainer without forcibly impinging against the same. Accordingly no dirt or water is driven by force or momentum through the interstices of the sieve, although the gasolene is not prevented from following its natural tendency to flow through the sieve and into the delivery pipe. Some of the gasolene flows downward into the comparatively large chamber 1 where the dirt and water settle to the bottom. The efficiency of the chamber in its purpose of settling the dirt and water is dependent on the quietness and absence of agitation of the liquid therein, and this latter is dependent in a large measure on the way the gasolene enters. The entrance of the gasolene into preliminary contact with the baffle-plate 4, and the subsequent distributing of the flow by the sieve 6, renders the final entrance of the gasolene into the lower part of the chamber 1 very still and quiescent. This is particularly true since a considerable percentage of the gasolene is deflected through the sieve in the first instance and thereby disposed of. It will be found in practice that the dirt and water settles at the bottom of the chamber 1, while that portion of the gasolene which did not pass through the sieve in the first instance is subsequently free to escape through the bottom of the sieve and at the end thereof.

Changes and variations may be made in the construction by which the invention is carried into effect. The invention is not, therefore, to be confined to the particular construction herein described and illustrated in the accompanying drawing.

What is claimed is—

A strainer comprising a chamber of inverted dome shape having a drain cock, an inlet pipe extending into the top of said chamber, and having a clear passage for the flow of fluid substantially clear across the top of the chamber, a wall forming a deflecting surface on the inside of said chamber for the incoming fluid, an elongated cup-shaped sieve directly below the inlet pipe and parallel to the flow thereof, and an outlet connection co-axial with said sieve.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

WILLIAM H. FINIGAN.

Witnesses:
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