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CARBURETOR AIRCLEANER RETAINER BAIL

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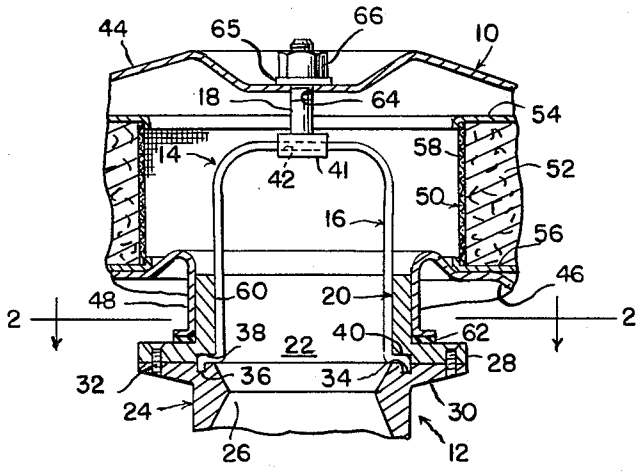


FIG.1.

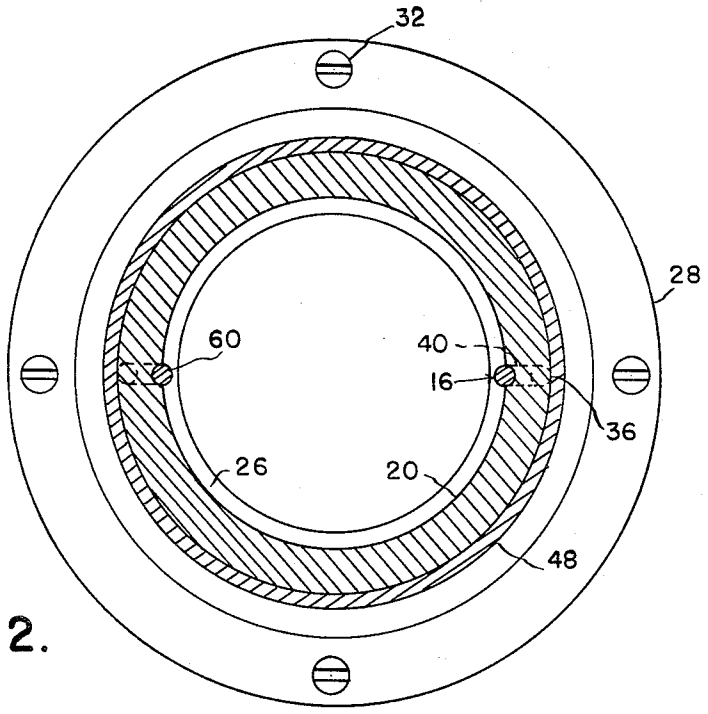


FIG.2.

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CARBURETOR AIRCLEANER RETAINER BAIL

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The invention relates to aircleaners and refers more specifically to apparatus for securing an aircleaner to a carburetor which apparatus is so constructed and is so installed on the carburetor as not to obstruct the air induction passage of the carburetor.

In the past, aircleaners have been provided with a mounting ring adapted to be sleeved over an aircleaner mounting lip provided on a carburetor air horn and have been held in assembly with the carburetor by means of a bolt extending through the aircleaner centrally thereof and secured to an aircleaner hold down bracket positioned over the air induction passage of the carburetor in obstructing relation thereto. This means of securing an aircleaner to a carburetor materially effects the operation of the engine with which the carburetor is associated in that a measurable engine power loss is effected by the interference of the aircleaner hold down bracket with the free passage of air into the carburetor air induction passage.

It is therefore one of the objects of the present invention to provide apparatus for securing an aircleaner to a carburetor which does not obstruct the air induction passage of the carburetor.

Another object is to provide apparatus for securing an aircleaner to a carburetor including a U-shaped aircleaner hold-down bail having an aircleaner mounting stud secured thereto centrally thereof and a separate aircleaner mounting lip member adapted to clamp the ends of the aircleaner hold-down bail to the carburetor air horn.

Another object is to provide apparatus for mounting an aircleaner on a carburetor as set forth above wherein the ends of the aircleaner hold-down bail extend radially outwardly and then axially downwardly of the carburetor air horn in assembly, the carburetor air horn is provided with axially extending recesses at opposite points around the circumference thereof for receiving the axially downwardly extending portions of the ends of the bail and the separate aircleaner mounting lip member is provided with similarly positioned, radially extending recesses for receiving the radially extending portions of the ends of the bail.

Another object is to provide apparatus for securing an aircleaner to a carburetor which is simple in construction, economical to manufacture and efficient in use.

The foregoing as well as other objects will become more apparent as this description proceeds, especially when considered in connection with the accompanying drawing illustrating a preferred embodiment of the invention, wherein:

FIGURE 1 is a partial section of an aircleaner mounted on a carburetor by aircleaner mounting apparatus constructed in accordance with the invention.

FIGURE 2 is an enlarged cross section of the carburetor, aircleaner and aircleaner mounting apparatus shown in FIGURE 1 taken on line 2—2 of FIGURE 1.

With particular reference to the figures of the drawing one embodiment of the present invention will now be disclosed.

As shown best in FIGURE 1, the aircleaner **10** is mounted on the carburetor **12** by the aircleaner mounting apparatus **14**. The aircleaner mounting apparatus **14** includes the aircleaner hold-down bail **16** and the aircleaner mounting stud **18**. The aircleaner hold-down bail **16** is secured to the carburetor **12** by the separate aircleaner mounting lip member **20** in a position such that the air induction passage **22** of the carburetor **12** is not obstructed thereby.

More specifically, the carburetor **12** includes the carburetor air horn **24** having a venturi portion **26** which with the separate aircleaner mounting lip member **20** forms the carburetor air induction passage **22**. The annular flange **30** is provided on air horn **24** for securing the separate aircleaner mounting lip member **20** to the carburetor air horn **24**. Axially extending recesses **34** are provided in the carburetor air horn **24** as shown in FIGURE 1 to receive the ends **36** of bail **16**.

The separate aircleaner mounting lip member **20** also includes an annular flange **28** by which it is secured to the annular flange **30** provided on the carburetor **12** by convenient means such as screws **32**. Radially extending recesses **38** as best shown in FIGURE 1 are provided in the separate aircleaner mounting lip **20** for receiving the radially extending portion **40** of the ends of the aircleaner hold-down bail **16**.

The aircleaner hold-down bail **16** of the aircleaner mounting apparatus **14** is a U-shaped resilient member which may be constructed of spring steel for example. Bail **16** is provided with the offset end portions **36** mentioned above which are clamped between the carburetor air horn **24** and the aircleaner mounting lip member **20** in assembly as shown in FIGURE 1.

The aircleaner mounting stud **18** is provided with a head **41** having an opening **42** therethrough. The bail **16** is passed through the opening **42** in head **41** to secure the stud **18** centrally of the bail **16** as shown in FIGURE 1.

Aircleaner **10** includes upper and lower exterior housing members **44** and **46**, respectively. The lower housing member **46** includes an aircleaner mounting ring **48** adapted to be sleeved over the separate air horn mounting lip member **20** in assembly, as shown best in FIGURE 1. Aircleaner **10** further includes a filter member **50** including the filter material **52** secured between the upper and lower annular plates **54** and **56** and the screen **58** in conjunction with a radially outer annular screen (not shown).

In securing the aircleaner **10** to the carburetor **12** the mounting apparatus **14** is first positioned on the carburetor **12** with the offset ends **36** of the aircleaner hold-down bail **16** positioned within the recesses **34**. The separate aircleaner mounting lip member **20** is then positioned over the bail **16** with the bail **16** fitting within the axial grooves **60** therein, as best shown in FIGURE 2, and with the radially extending portions **40** of the bail **16** within the recesses **38**. The aircleaner mounting lip member **20** is then secured to the carburetor **12** by means of the screws **32** and the flanges **28**, **30**. A sealing gasket **62** is placed on the lip **28**, as shown best in FIGURE 1, and the aircleaner **10** is sleeved over the aircleaner mounting lip member **20** so that the stud **18** extends through the opening **64** in the upper housing member **44** of the aircleaner **10**. The washer **65** is placed over the stud **18** and the nut **66** is then threaded on the stud **18**.

Thus it will be seen that in accordance with the invention there is provided mounting apparatus for securing an aircleaner to a carburetor which is simple in construction, economical to manufacture and efficient in operation. Further, the mounting apparatus for the aircleaner, in accordance with the invention, is so constructed as not to obstruct air being drawn into the carburetor induction passage **22**.

The drawing and the foregoing specification constitute a description of the improved aircleaner mounting apparatus in such full, clear, concise and exact terms as to enable any person skilled in the art to practice the invention, the scope of which is indicated by the appended claim.

What I claim as my invention is:

A carburetor air horn defining an air induction passage therein, a separate annular air horn lip member positioned over said air induction passage in alignment therewith, means for securing the air horn lip member to the carburetor air horn, an aircleaner mounted on said air horn lip member over said air induction passage, aircleaner mounting apparatus positioned in non-obstructing relation to said air induction passage for securing said aircleaner on said carburetor air horn including a resilient aircleaner hold-down bail having end portions extending axially through the interior of said air horn lip member and terminating in offset portions including radially and axially extending portions, axially extending recesses in the top of said carburetor air horn adjacent the air induction passage therein, and horizontally extending recesses in the bottom of the air horn lip member forming passages between the air horn lip member and carburetor air horn for receiving said offset end portions of the aircleaner hold-down bail and an aircleaner mounting stud secured to the central portion of said bail.

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