

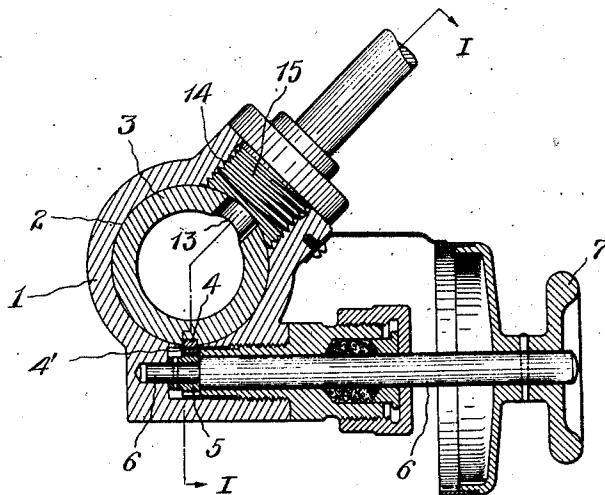
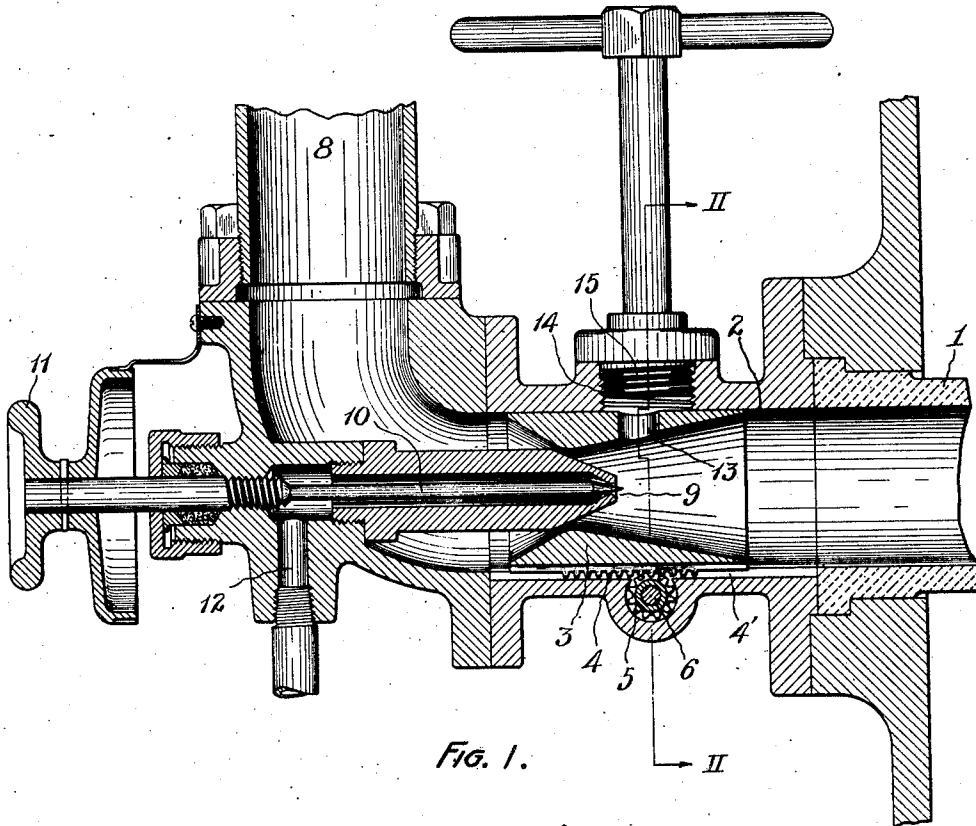
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MIXING DEVICE FOR OIL GAS APPARATUS

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MIXING DEVICE FOR OIL-GAS APPARATUS.

Application filed November 12, 1925. Serial No. 68,543.

My invention relates to mixing devices for use in oil-gas apparatus and designed to introduce air and oil into a mixing tube before their introduction into the vaporizing and fixing chambers of an oil-gas apparatus such as is shown and described in my pending application for United States Letters Patent, Serial No. 707,071, filed May 31, 1924.

The object of my invention is to provide a device of the above-described character which is simple in its construction and efficient in its operation and which will permit of ready access to its interior for the purpose of igniting the mixture in the tube.

The said invention consists of means hereinafter fully described and particularly set forth in the claims.

In the annexed drawing:

Figure 1 represents an axial cross-section of a fragmentary portion of a mixing device embodying my invention;

Fig. 2 represents a section taken upon the plane indicated by lines II—II in Fig. 1.

In the illustrated embodiment of my invention, the mixing pipe 1 has a portion 2 which forms a slideway for a Venturi-tube 3. This Venturi-tube 3, as plainly shown in Figure 1, is formed with a bore whose wall converges toward the entry end of the mixing pipe 1, but whose smallest cross-sectional area is disposed somewhat short of the extreme entry end, this wall diverging from the most restricted portion of the bore to the extreme entry end of the mixing pipe 1 so as at said extreme entry end to be substantially the same cross-sectional area as the pipe 1. The Venturi-tube 3 is provided with a rack 4 which projects into a groove 4' formed in the part 2. This rack is engaged by a pinion 5 fixed to a small shaft 6 suitably mounted and provided with the handle 7. By turning the latter, the venturi may be moved and hence adjusted axially in the tube part 2.

The mixing tube is connected with the air pipe 8, the latter discharging into the enlarged entry end of the mixing pipe 1, and projecting through this pipe 8 coaxially with said tube-part 2 is a fixed conical-ended oil nozzle 9 controlled by a needle valve member 10 operable by means of a handle 11. The oil nozzle communicates with a duct 12 leading to a suitable source of oil.

The Venturi-tube is formed with an aper-

ture 13 which registers with a threaded aperture 14 in the wall of the tube-part 2, which latter aperture is, however, of considerably greater diameter than aperture 13, as shown. Aperture 14 is normally closed by means of a suitable threaded plug 15.

It will be seen from the above-described construction that the Venturi-tube may be adjusted relatively to the conical end of the oil nozzle and the area of the air passage between them varied so as to vary and hence adjust the amount of air admitted into the mixing tube.

When it is desired to ignite the mixture in the tube, the plug 15 is removed, thereby affording access to such mixture and permitting it to be ignited through the registering apertures 13 and 14.

Aperture 14 being of considerably greater diameter than aperture 13, a considerable range of adjustment of the Venturi-tube is secured without destroying the registration of such apertures.

What I claim is:

1. In a mixing device for oil-gas apparatus, the combination of a mixing tube; a Venturi-tube mounted therein, said Venturi-tube; being formed with a rack portion; a cooperating gear engaging said rack and means for driving said gear so as to adjust said Venturi-tube in said mixing tube; an air pipe opening into the small end of said Venturi-tube; a valve-controlled oil nozzle extending into said Venturi-tube within said air pipe, said mixing and Venturi-tubes being provided with registering apertures; and a closure for the aperture in the mixing tube, said latter aperture being of larger diameter than the registering aperture of said Venturi-tube.

2. In a mixing device for oil-gas apparatus, the combination of a mixing tube; a Venturi-tube mounted therein; means for longitudinally adjusting said Venturi-tube; an air pipe opening into said Venturi-tube; a valve-controlled oil nozzle extending into said Venturi-tube within said air pipe, said mixing and Venturi-tubes being provided with registering apertures; and a closure for the aperture in the mixing tube, said latter aperture being of larger diameter than the registering aperture of said Venturi-tube.

Signed by me this 31st day of October, 1925.

ALVIN J. BASSETT.