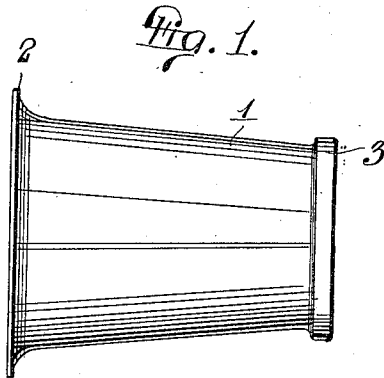
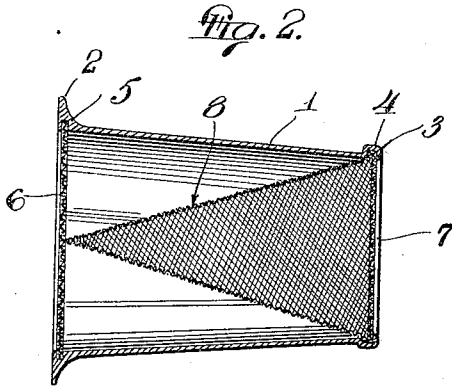
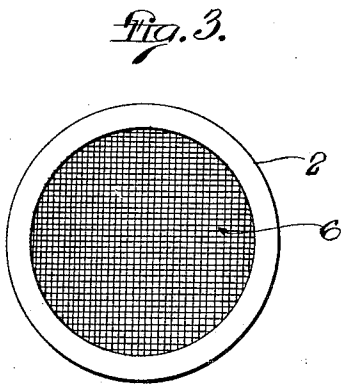
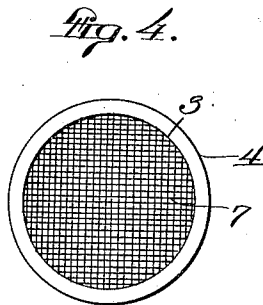


1,401,609.

D. KLEIN.
MIXER.
APPLICATION FILED OCT. 13, 1920.

Patented Dec. 27, 1921.



Inventor
Deo Klein

By *Mr. H. Mulligan* Attorney

UNITED STATES PATENT OFFICE.

DEO KLEIN, OF GILLESPIE, ILLINOIS.

MIXER.

1,401,609.

Specification of Letters Patent.

Patented Dec. 27, 1921.

Application filed October 13, 1920. Serial No. 416,675.

To all whom it may concern:

Be it known that I, DEO KLEIN, a citizen of the United States, residing at Gillespie, in the county of Macoupin and State of Illinois, have invented certain new and useful Improvements in a Mixer, of which the following is a specification.

This invention relates to attachments for gasoline motors and more particularly to a mixer adapted for use in any hydro-carbon engine for the purpose of thoroughly mixing an explosive charge as it passes through the device.

One of the objects of the invention is to provide an apparatus of this character which may be mounted within the manifold extending from the carbureter so that the explosive charge emitted from the carbureter will pass through the mixer so that the air and gasoline will be thoroughly co-mingled to obtain a more effective charge with a higher co-efficient of combustibility than would otherwise be the case.

Another object of the invention is to provide a device of this character which will tend to increase the power of the engine and cause a smoother and more even operation of the moving parts operated by the explosion within the cylinders.

Other objects of the invention will appear upon consideration of the following detail description and accompanying drawings, wherein:—

Figure 1 is a side elevation of the device constructed in accordance with my invention,

Fig. 2 is a longitudinal section through the same,

Fig. 3 is an end elevation of the large end, and

Fig. 4 is an elevation of the small end.

Referring to the drawing by numerals, the sleeve 1 is constructed of thin material, preferably sheet metal and has one end provided with an annular flange 2 which is adapted to extend into the manifold at a point adjacent the carbureter. The sleeve 1 is tapered from the large end 2 to the small end 3 and the latter is provided with an annular channel 4 formed by pressing outwardly a portion of the small end of the sleeve as shown to advantage in Fig. 2. In the flange end 2 is an annular recess 5 within which a screen panel 6 is mounted. This panel is preferably constructed of fine wire mesh of any preferred grade while the oppo-

site or small end of the sleeve is provided with a screen panel 7 also constructed of wire mesh or other suitable foraminous material, thereby closing both ends of the sleeve 1 with a screen barrier through which the explosive charge must pass when it is emitted from the carbureter and passes through the intake end of the manifold.

Within the sleeve is a conical screen 8, the pointed end of which is exactly in the center of the screen panel 6. The conical screen 8 has its open or large end provided with an annular rim which is arranged in the annular recess 4 so that both the marginal edge of the large end of the conical screen and the marginal edge of the small panel 7 are held in position by the annular member 4 at the small end of the sleeve.

Obviously the device may be constructed of any desired length and its diameter will be governed according to the size of the intake manifold and it should also be observed that the wire may be of any desired size so that an effective straining of the mixture will occur when the charge passes from the carbureter while the particles of the charge will be thoroughly broken up so that a finer mixture will be passed through the manifold into the cylinders. The tapered formation of the sleeve 1 causes the charge to be directed toward the oppositely inclined surface of the foraminous cone and since the charge must also pass through the screen panels 6 and 7 it will be obvious that the mixing will be thoroughly accomplished.

What is claimed is:—

1. A mixer comprising an elongated tapered sleeve having its large end provided with an annular flange and said enlarged end being also provided with an annular recess extending into the said flange, the opposite small end of the sleeve being provided with a pressed out annular portion forming a recess, both ends of the said sleeve being open, a screen panel mounted in the said annular recess in the large end of the sleeve, a second screen panel mounted in the small end of the sleeve and having its marginal edge disposed in the said annular recess, a conical screen member having its pointed end directly in the center of the said screen at the large end of the sleeve and having its large open end provided with an annular rim adapted to extend into the said annular recess in the small end of the sleeve whereby the screen at the small end of the sleeve

will extend across the large open end of the said conical screen.

2. A mixer of the character described comprising an elongated tapered sleeve having both ends open, a screen panel mounted in the small end of the sleeve, a second screen panel mounted in the large end of the sleeve, a conical screen member of a length equal to the length of the said sleeve, and

having its pointed end in contact with the center of the screen panel at the large end of the said sleeve, its large open end being secured to the opposite end of the sleeve at the marginal edge of the screen panel in the small end of the sleeve.

In testimony whereof I affix my signature.

DEO KLEIN.