Oct. 21, 1930. J. B. WEAVER 1,778,876

FLASH ARRESTER

Filed Nov. 4, 1927

Fig. 1.

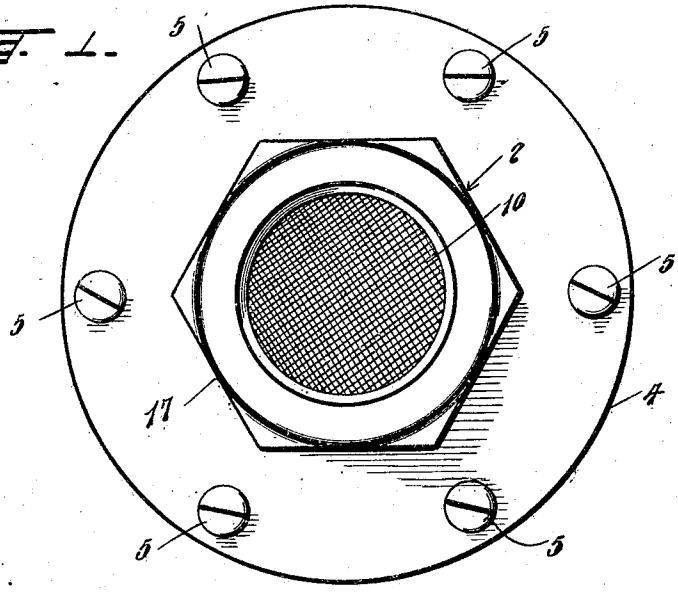
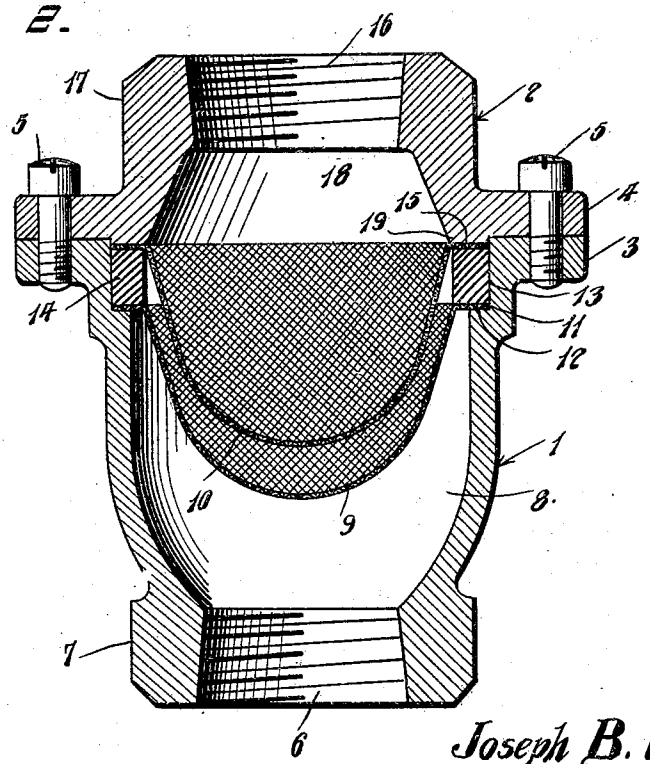


Fig. 2.



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UNITED STATES PATENT OFFICE

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FLASH ARRESTER

Application filed November 4, 1927. Serial No. 231,062.

This invention has reference to a fire or flash arrester for preventing explosions in gas distributing conduits such as the feed line of a gas generator and burner, and has for an object to provide a flash arrester composed of separable sections designed to be cast, machined and assembled in an efficient and economical manner.

Other objects and advantages of the invention will be apparent from the following detailed description and from the accompanying drawing wherein:

Figure 1 is a top plan view of a flash arrester constructed in accordance with the invention, and

Figure 2 is a longitudinal central sectional view of the same.

As shown in the drawing, the flash arrester consists of a body casting 1 and a cap casting 2 provided with mating flanges 3 and 4 which are secured together by screw bolts 5. The body casting is elongated and has a threaded opening 6 for attachment to a combustible gas feed pipe from a gas generator, the end of the casting being formed with a nut 7 to facilitate the placing of the device in the feed line. An enlarged gas chamber 8 is provided in the casting 1 and suspended within this chamber are a pair of fire arresting screens 9 and 10.

Screen 9 is formed with an annular flange 11 which seats upon the shoulder 12 of an annular recess 13 at the flanged end of the casting. A rubber spacing gasket 14 fits in the recess 13 and rests upon the flange 11 of the screen 9. Screen 10 is nested in the screen 9 and is likewise formed with a retaining flange 15 which engages over the upper surface of the spacing gasket.

The cap casting 2 has a threaded opening 16 so that it can be attached to a burner pipe and it is likewise provided with a nut 17 to facilitate its attachment. The flanged end of the cap 2 has a tapering recess 18 adapted in the assembly of the parts to form a continuation of the gas chamber 8 and projecting outwardly from the rim of the recess is an annular clamping rib 19 which is adapted to bear against the rubber gasket 14. Hence, when the screw bolts 5 are tightened, the flanges of the fire screens are securely clamped between the gasket and the confining parts of the body and cap castings. This arrangement not only provides for the convenient and efficient placing of the fire screens within the gas chamber but it also has the advantage of enabling changes and repairs to be made with a minimum of effort and time.

When the flash arrester is incorporated in the feed line of a gas generator and burner, the gas normally flows through the gas chamber 8 and out through the cap casting into a gas conveying pipe leading to the flame jets of the burner. In the event the gas within the burner pipe becomes ignited by any back flash from the jets, the screens 9 and 10 will arrest the flame and thereby prevent combustion of the inflammable gases within the feed line back of the arrester.

Having thus described the invention, what I claim is:

A flash arrester comprising a body casting provided at one end with an outwardly projecting flange, there being an annular recess formed at the inner edge of the flanged end of the casting, a cup-shaped screen positioned within the body casting and having its edge portion flanged outwardly and seated on a shoulder formed by said recess, a gasket seated in said recess and having one edge bearing against the flanged edge of the screen, a second cup-shaped screen nested within the first mentioned screen and having its edge flanged outwardly and seated upon the opposite edge of said gasket, a cap casting provided with a flange mating the flange of the body casting, an annular clamping rib projecting from the cap casting into said recess and serving to clamp the flanged edges of the screens against said gasket, and means for securing the flanges of the two castings together.

In testimony whereof I hereunto affix my signature.

JOSEPH B. WEAVER.