(No Model.)

F. J. HERRON & E. M. HUGENTOBLER.

FUEL CARTRIDGE.

No. 379,697. Patented Mar. 20, 1888.

Fig. 1

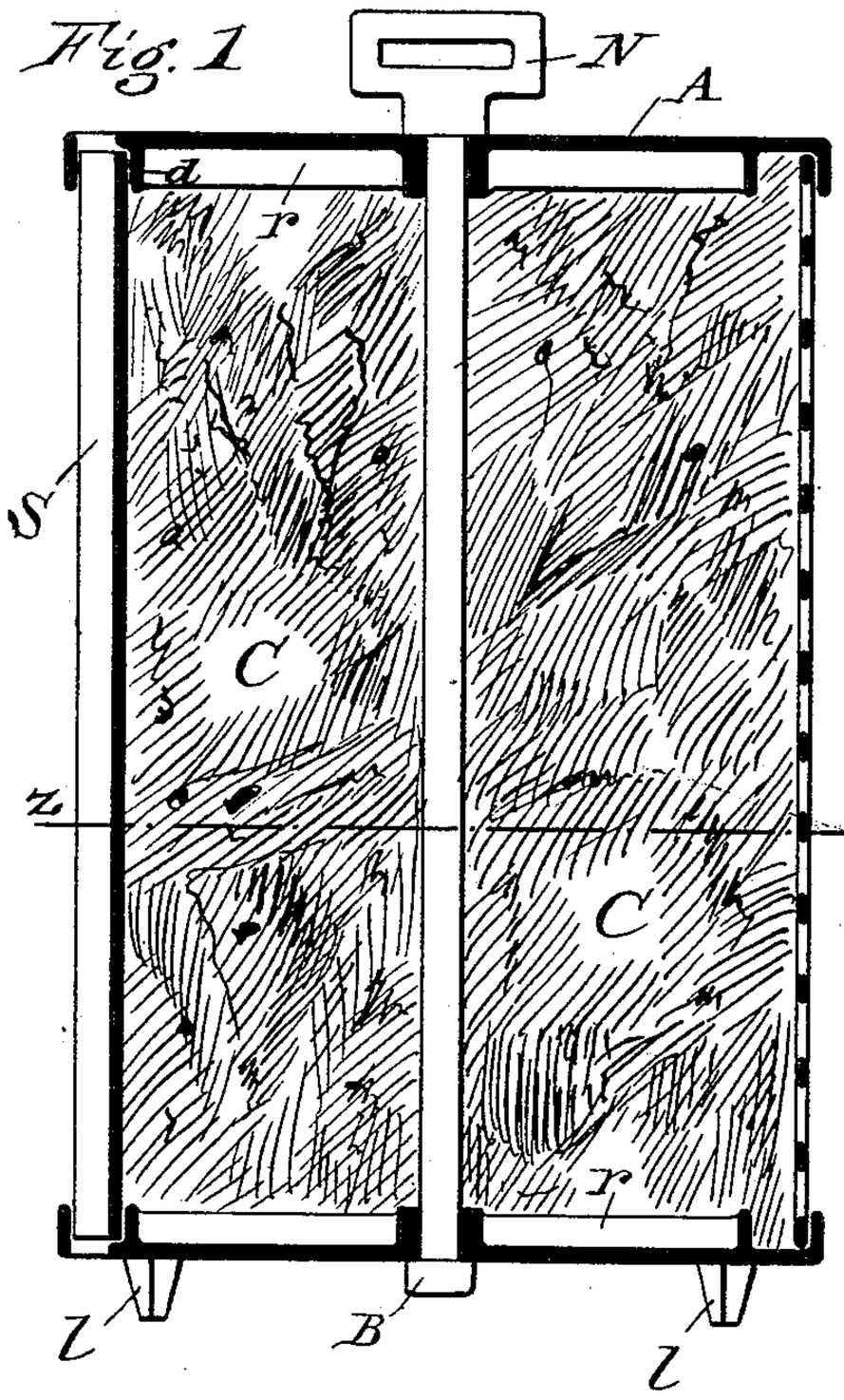


Fig. 2

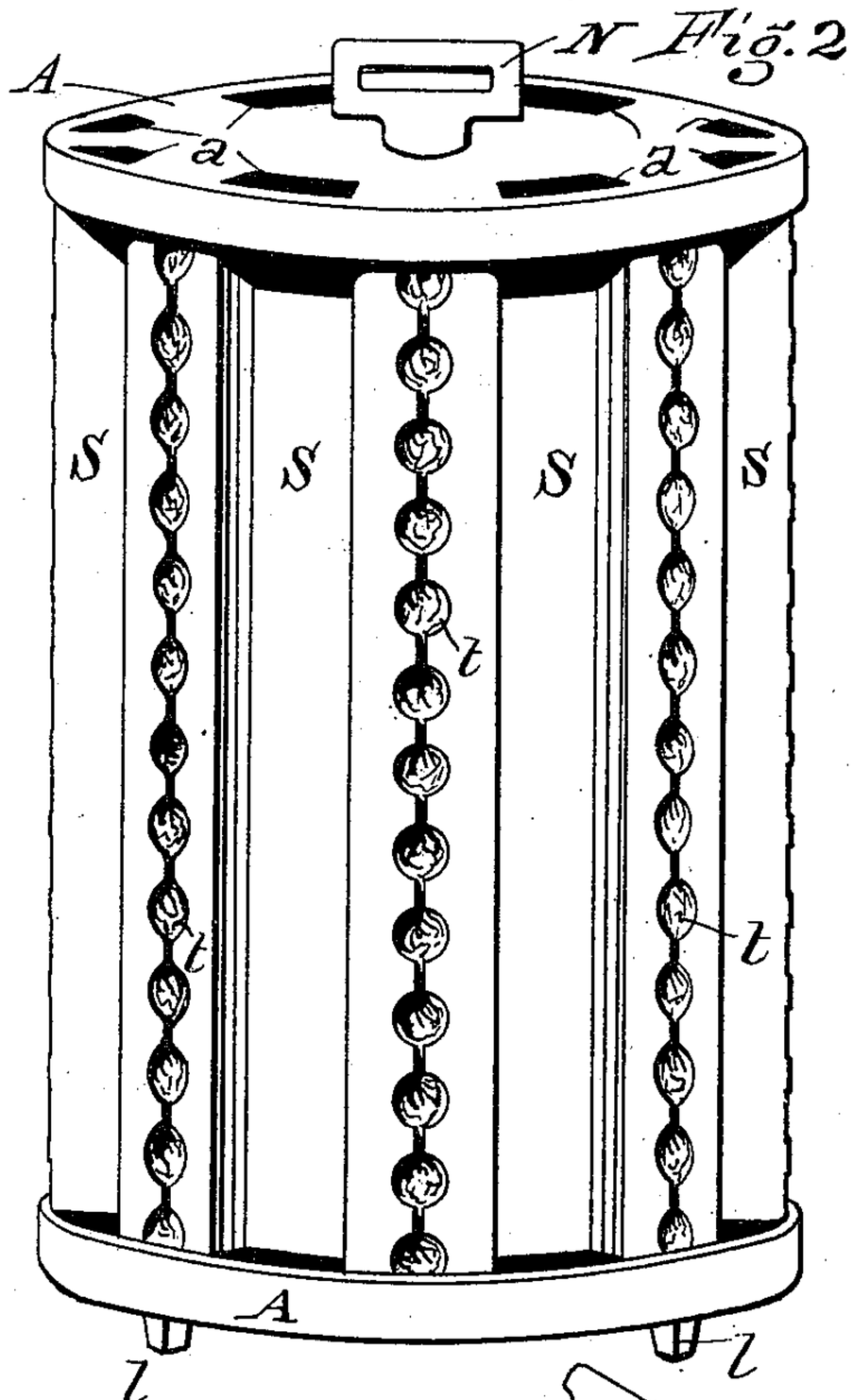
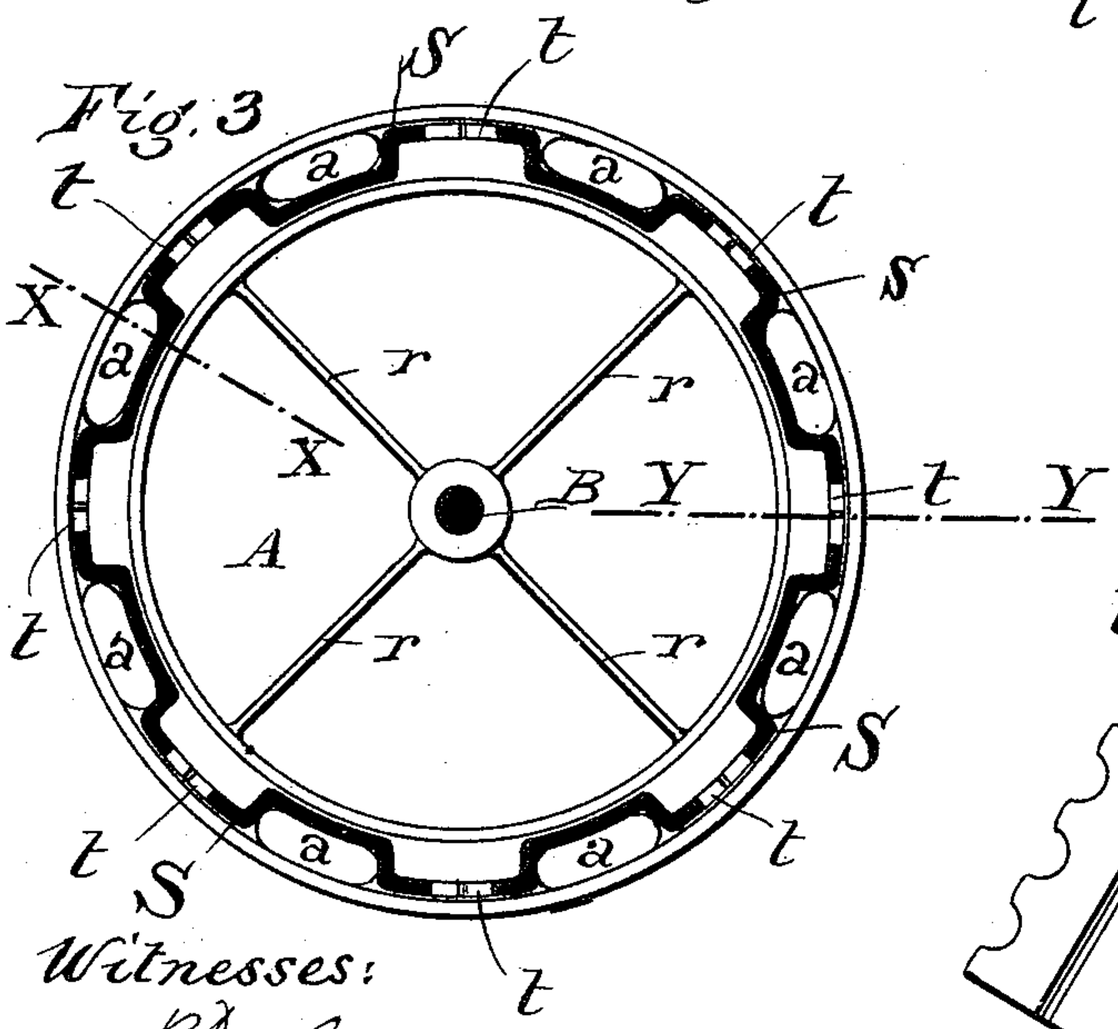
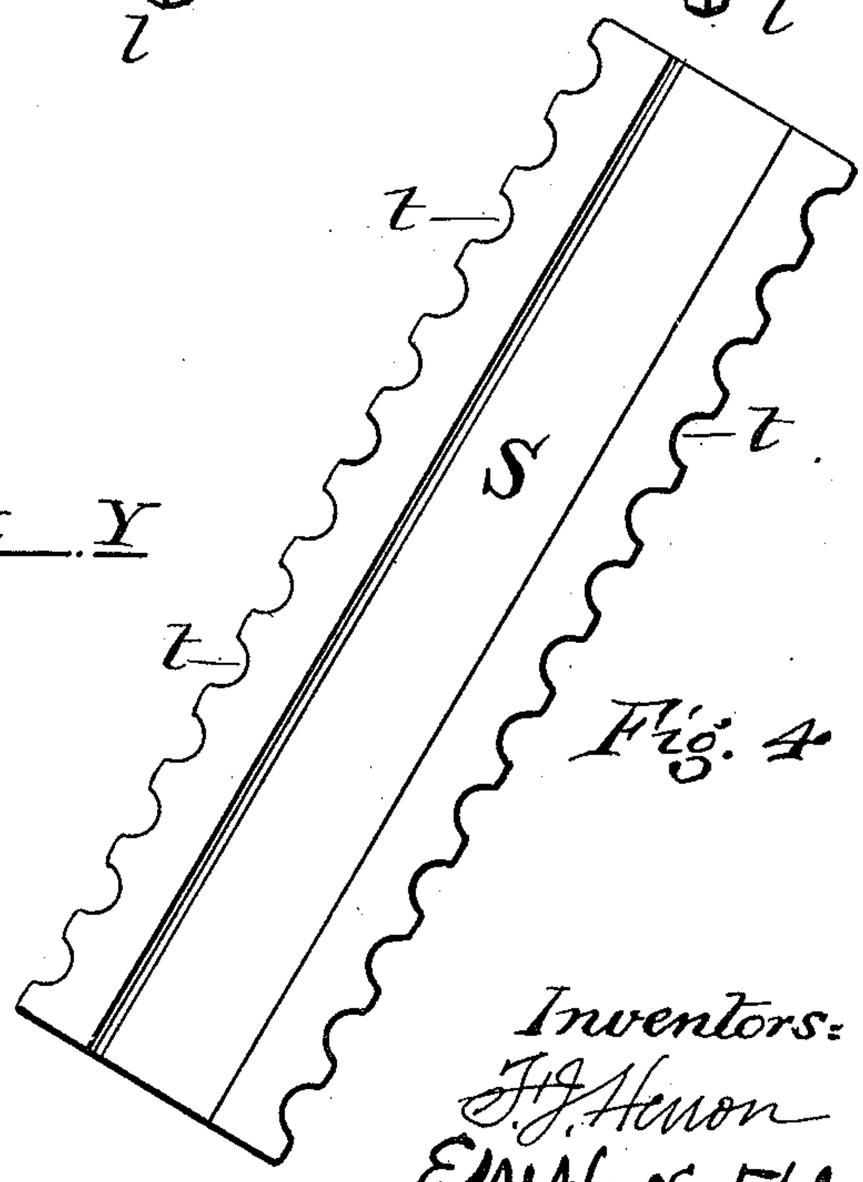


Fig. 3



Witnesses:
R. Des Anges.
B. Tolles.

Fig. 4



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UNITED STATES PATENT OFFICE.

FRANCIS J. HERRON AND EMIL M. HUGENTOBLER, OF NEW YORK, N. Y.

FUEL-CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 379,697, dated March 20, 1888.

Application filed October 19, 1887. Serial No. 252,565. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS J. HERRON and EMIL M. HUGENTOBLER, of the city, county, and State of New York, have invented certain new and useful Improvements in Fuel-Cartridges, of which the following is a complete description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to that class of fuel-cartridges for burning mineral oils or liquid hydrocarbons which consists of a body or core of absorbent material inclosed in a perforated or foraminated shell, the combustion of the oil taking place at the perforations of the shell after the cartridge has been impregnated therewith; and the object of our invention is to construct and proportion said cartridges, whereby slower and better combustion may be secured.

In the accompanying drawings, Figure 1 is a vertical section of our cartridge, the left-hand half of said section being on the vertical radial plane X and the right-hand half on the vertical radial plane Y. Fig. 2 is a perspective view. Fig. 3 is a horizontal section on line Z, with the filling of the cartridge removed. Fig. 4 is a view of one of the side pieces or staves which form the sides of our cartridge.

Our cartridge is cylindrical in shape. It consists of two heads, A A, (the lower one with suitable lugs or supports, *l*,) held together by means of the bolt B and loop-shaped nut N, the latter affording means for lifting and carrying the cartridge. The sides of the cylinder are formed by a series of pieces or staves, S, of equal length. The ends of these staves fit in annular grooves on the heads A, formed between a rim running along the edges of said heads and an annular rim or circular rib, *d*, also on said heads A. When the bolt B is drawn up, the staves S become locked in position, and cannot, therefore, shift either inwardly or outwardly. The heads A are further stiffened by means of radial ribs *r*.

The staves S are serrated on their edges, as shown at *t*, so that when the cartridge is filled with asbestus, mineral wool, or other absorbent material, C, rammed therein, the oil absorbed thereby will burn at the interstices in the cylindrical shell formed by the indentations on the serrated edges of the staves S. The object of this mode of construction is to provide a limited area of burning-surface, instead of having the fire spread over the whole surface, as is the case when wire-netting or perforated metal is used to form the cylindrical part of the cartridge. This insures slower combustion, and by dividing the flame provides for its more intimate contact with the surrounding air, and therefore for better combustion.

To further enhance combustion, the staves S are depressed longitudinally in their center, as may be seen in Fig. 3. Opposite such depressions are provided openings *a* in the heads A, through which openings air from the ends of the cartridge (where there is no flame) may be admitted along the depressions in the staves S to the flame burning on the serrated edges of said staves.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a fuel-cartridge of the kind described above, in combination, the two heads provided with grooves on their inner faces, the staves having their edges serrated and their ends engaging into said grooves on the heads, and a central through-bolt to draw the heads together and secure the staves in position, as shown and described.

2. In a fuel-cartridge of the kind described above, in combination, the two heads provided with grooves on their inner faces and suitable perforations, the staves having their edges serrated, their ends engaging into said grooves on the heads and their centers depressed longitudinally and inwardly, the ends of said depressions matching the perforations on the heads, and, lastly, a central through-bolt to draw the heads together and secure the staves in position, as shown and described.

In witness whereof we have hereunto set our hands this 24th day of September, 1887.

FRANCIS J. HERRON.
E. M. HUGENTOBLER.

In presence of—
R. DESBURGES,
CHAS. H. SMITH.