

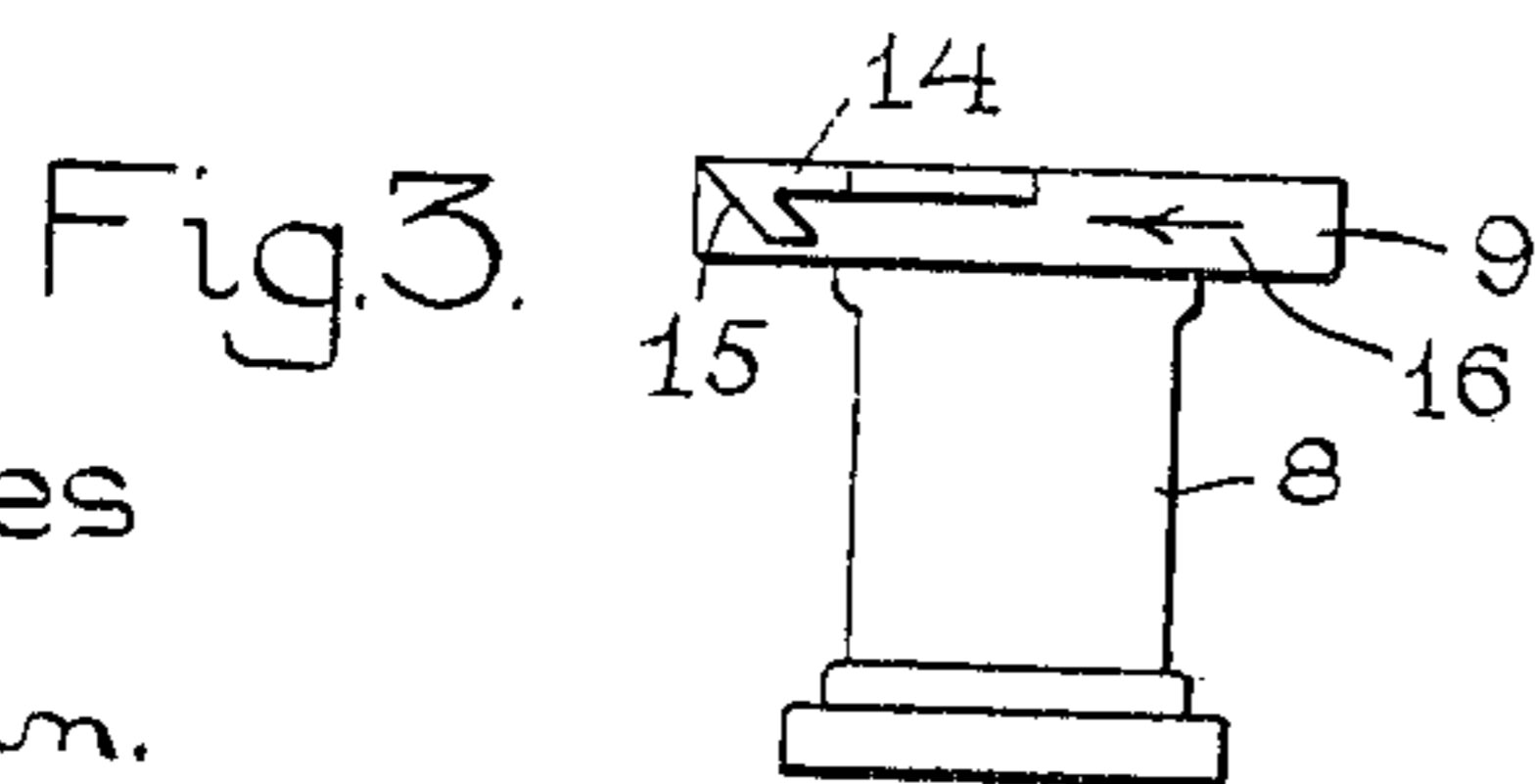
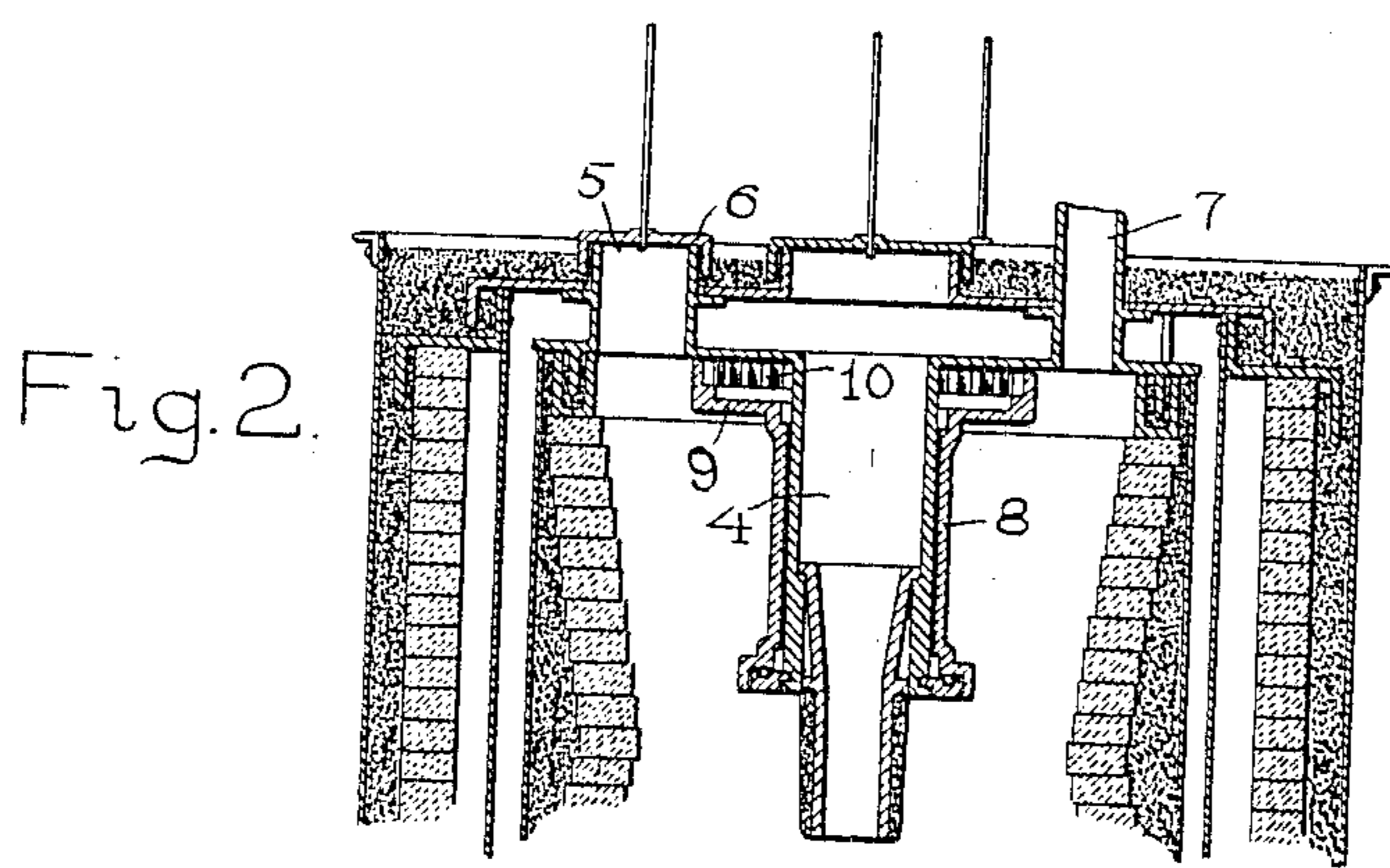
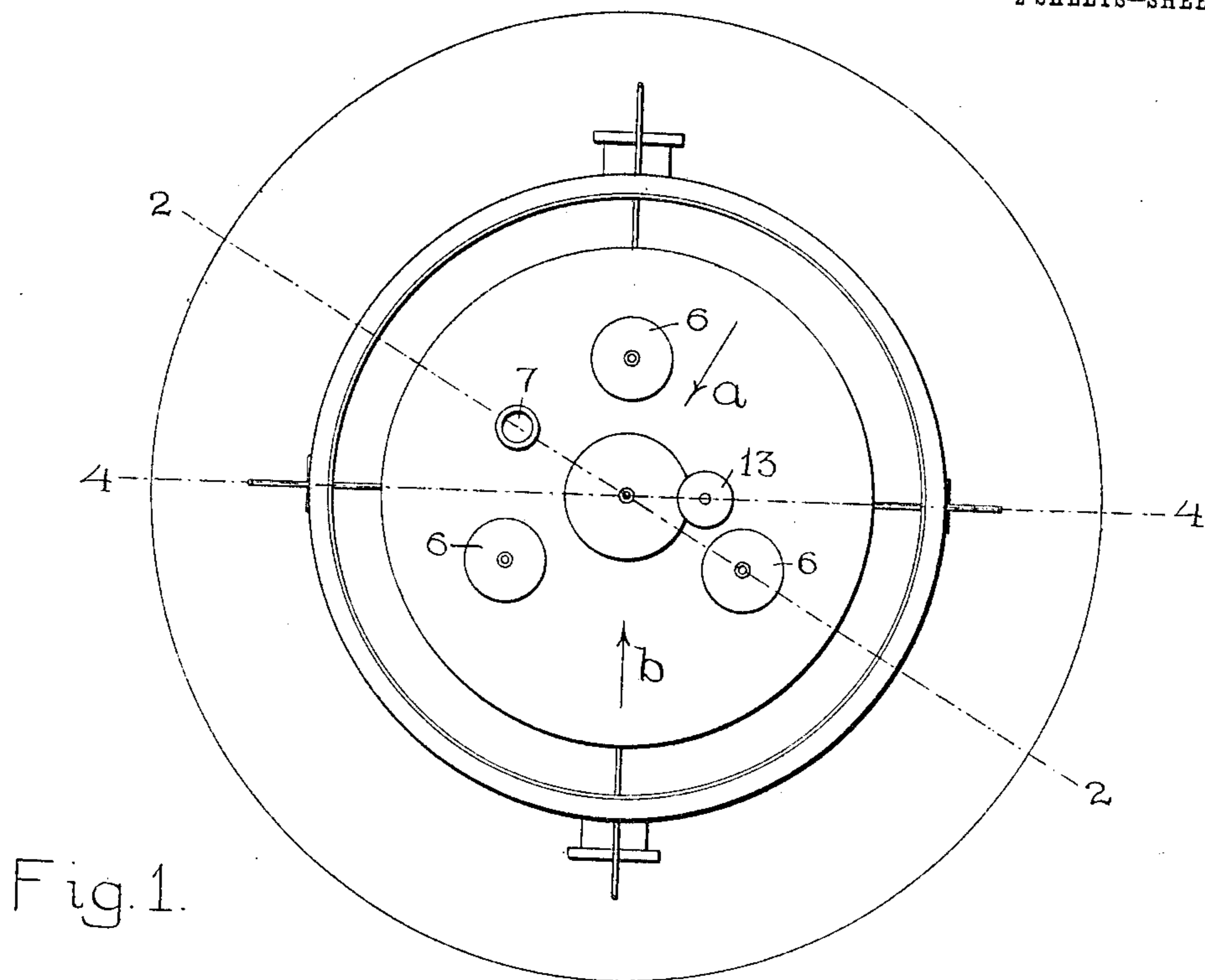
No. 819,075.

PATENTED MAY 1, 1906.

C. H. MORGAN.
GAS PRODUCER.

APPLICATION FILED JUNE 3, 1904.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

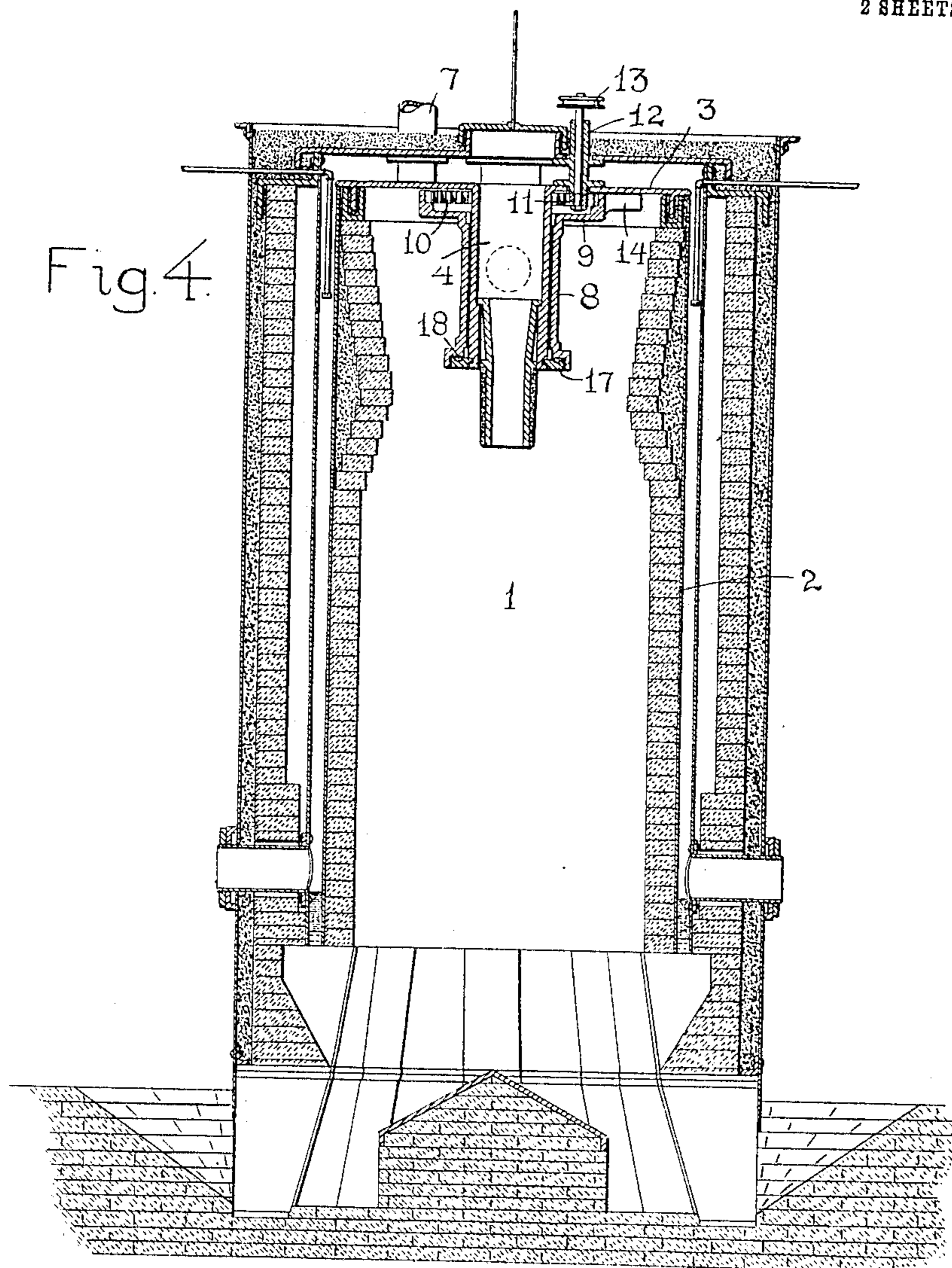
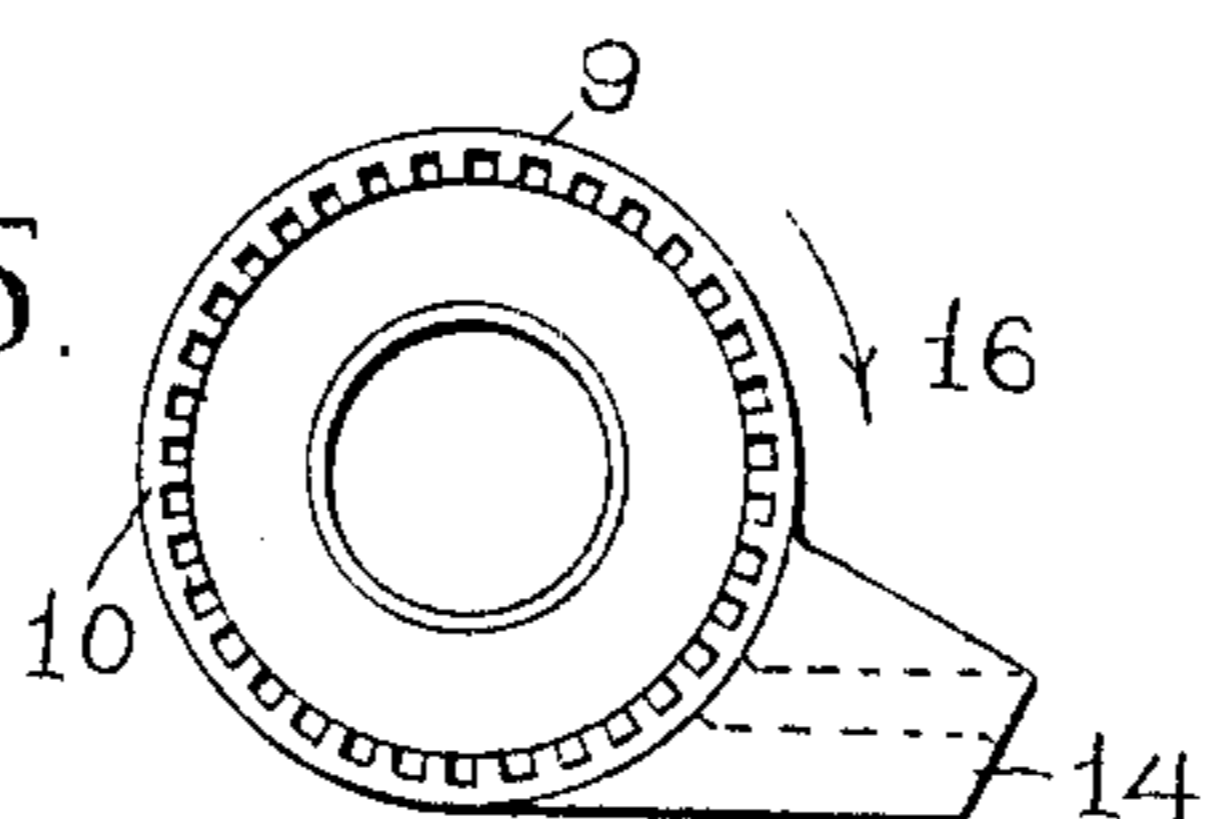


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES H. MORGAN, OF WORCESTER, MASSACHUSETTS.

GAS-PRODUCER.

No. 819,075.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed June 3, 1904. Serial No. 210,960.

To all whom it may concern:

Be it known that I, CHARLES H. MORGAN, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Gas-Producers, of which the following is a specification, accompanied by drawings forming a part of the same, in which—

Figure 1 represents a top view of a gas-producer embodying my invention. Fig. 2 is a central vertical sectional view of the upper end of the gas-producer, said section being shown on line 2 2, Fig. 1, looking in the direction of the arrow *a*. Fig. 3 is a side elevation of the rotating coal-distributor. Fig. 4 is a central vertical sectional view through the gas-producer, said section being taken on line 4 4, Fig. 1, looking in the direction of the arrow *b*; and Fig. 5 is a top and detached view of the rotating coal-distributor.

Similar reference-figures refer to similar parts in the different views.

My present invention relates particularly to a device for accomplishing the uniform distribution of coal in that class of gas-producers, known as "suction" or "downdraft" producers, provided with a concentric twyer at the upper end of the gas-producer chamber; and it consists in providing a rotating blade journaled within the gas-producer chamber and concentric thereto and arranged to sweep past the mouth of a fuel-opening, whereby the fuel accumulating beneath said mouth is distributed around the producer, causing the upper surface of the mass of fuel to be leveled.

Referring to the accompanying drawings, 1 denotes a combustion or gas-producer chamber having side walls 2 and a cover 3, consisting of a metal plate provided at its center with a depending tube 4, forming a twyer, through which air is admitted to the chamber 1.

5 is a manhole having a cover 6, and 7 is an opening through the cover for the admission of coal, preferably communicating with a hopper to facilitate the admission of coal.

Journaled on the twyer 4 is a sleeve 8, having at its upper end a circular cup-shaped flange 9, provided with an internal gear 10, which is engaged by a pinion 11, carried on the lower end of a vertical shaft 12, to which rotary motion is imparted in any suitable manner, in the present instance by means of a scored pulley 13. Projecting horizontally and preferably tangentially from one side of

the cup-shaped flange 9 is a V-shaped blade 14, with its advancing side presenting a beveled surface 15 as the blade is rotated in the direction of the arrow 16. At each revolution of the blade 14 it is carried past the mouth of the opening 7, so that as the chamber 1 fills with coal any accumulation of coal directly beneath the opening 7 will lie in the path of the rotating blade 14 and be pushed in front of the blade until it falls by gravity into any depression in the mass of coal, thereby maintaining a level surface, while the beveled surface 15 would impart a downward pressure to the mass of coal in the producer-chamber tending to firmly compact the mass and fill up the interstices in the body of coal which may have been formed by the delivery of coal through the opening 7.

I do not confine myself to any details of construction of the rotating sleeve 8 and blade 14; but, as represented in the drawings, I support the sleeve 8 upon an annular collar 17, detachably connected in any suitable manner to the lower end of the twyer 4 and preferably provided at its upper surface with an annular track for a series of friction-balls 18. The blade 14 may be rotated by any of the known devices now employed in gas-producers for imparting a rotary motion to a coal-distributor, said rotary motion being either continuous or intermittent, as may be deemed desirable.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a gas-producer, the combination with a gas-producing chamber, of a cover for said chamber, a rotating member journaled beneath said cover, an opening in said cover for the admission of fuel eccentric to the axis of said member, a scraping-blade projecting from the top of said rotating member, whereby the top of the fuel in said chamber is leveled.

2. In a gas-producer, the combination with a gas-producing chamber, of a cover for said chamber, a rotating member journaled beneath said cover, an opening in said cover for the admission of fuel eccentric to the axis of said member, a scraping-blade projecting tangentially from the top of said rotating member, whereby the top of the fuel in said chamber is leveled.

3. In a gas-producer, the combination with a gas-producing chamber, of a cover for said chamber, a rotating member journaled beneath said cover, an opening in said cover for

the admission of fuel eccentric to the axis of said member, a scraping-blade with its advancing side beveled projecting from the top of said rotating member, whereby the top of the fuel in said chamber is leveled.

4. In a gas-producer, the combination with a gas-producing chamber having an opening for the admission of coal, of a rotating sleeve journaled concentrically with the axis of the chamber, a tangential blade carried by said sleeve, a cup-shaped flange on said sleeve, having an internal gear, a pinion inclosed in said flange and engaging said gear, and means for rotating said pinion.

5. In a gas-producer, the combination with

a gas-producing chamber having a cover, of a twyer depending from said cover concentrically to the axis of said chamber, an opening through said cover eccentric to the axis of said chamber, a sleeve journaled on said twyer, means for rotating said sleeve, a blade carried by said sleeve and projecting beneath said opening, said blade having its advancing side tangential to said sleeve.

Dated this 27th day of May, 1904.

CHAS. H. MORGAN.

Witnesses:

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EDWIN L. SMITH.