M. S. WRIGHT.
Carbureter.

No. 226,581. Patented April 13, 1880.

Fig. 1

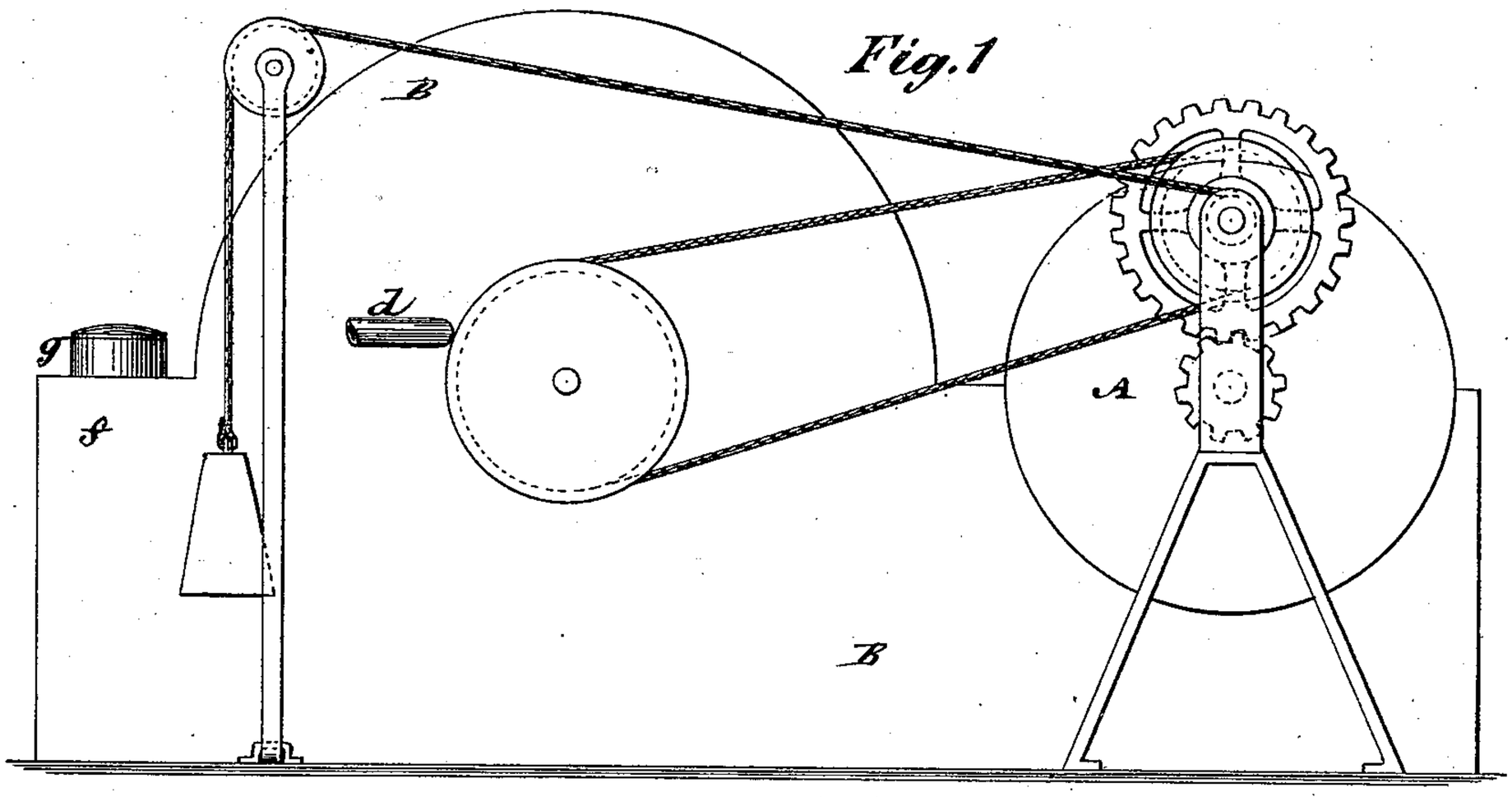


Fig. 2

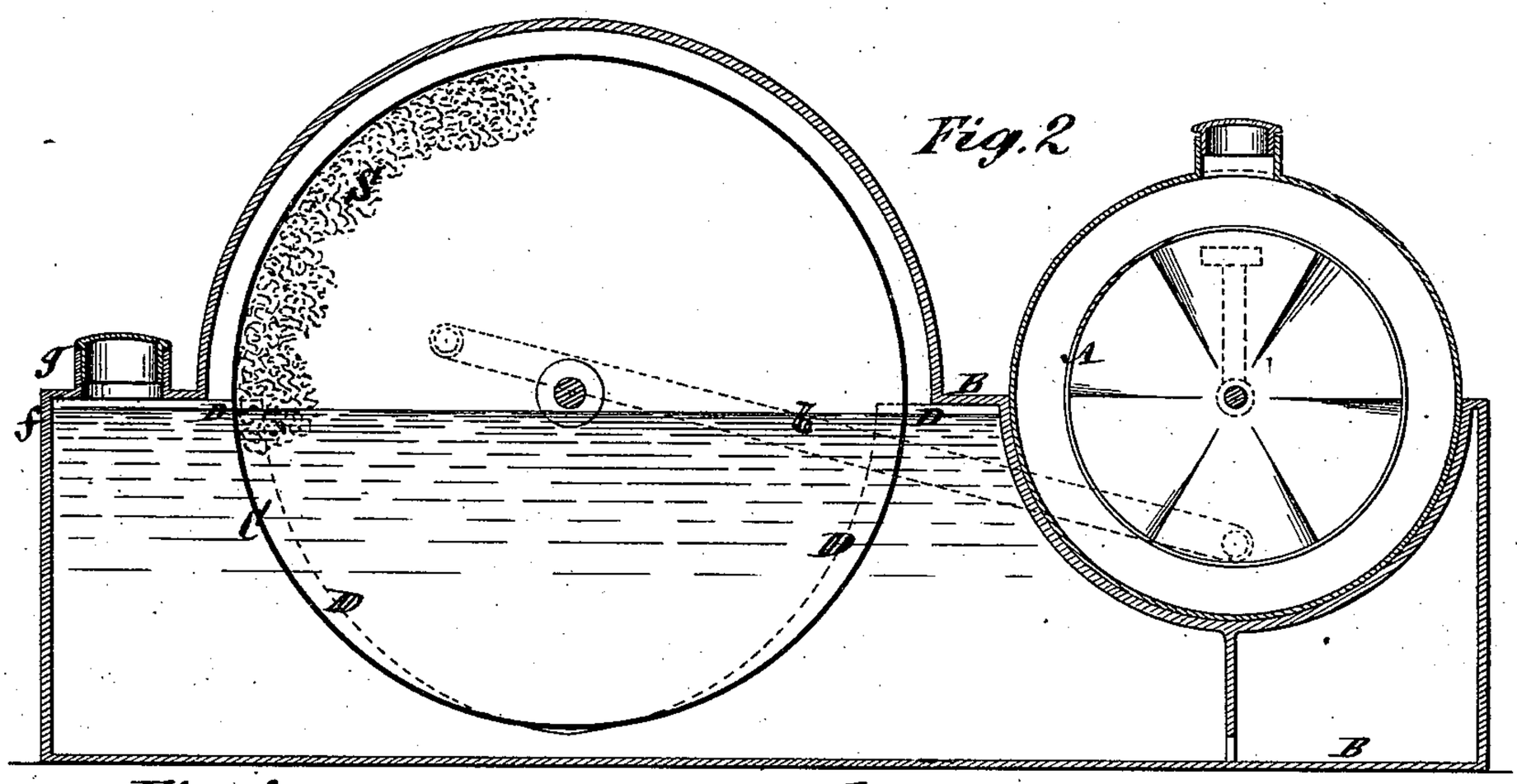
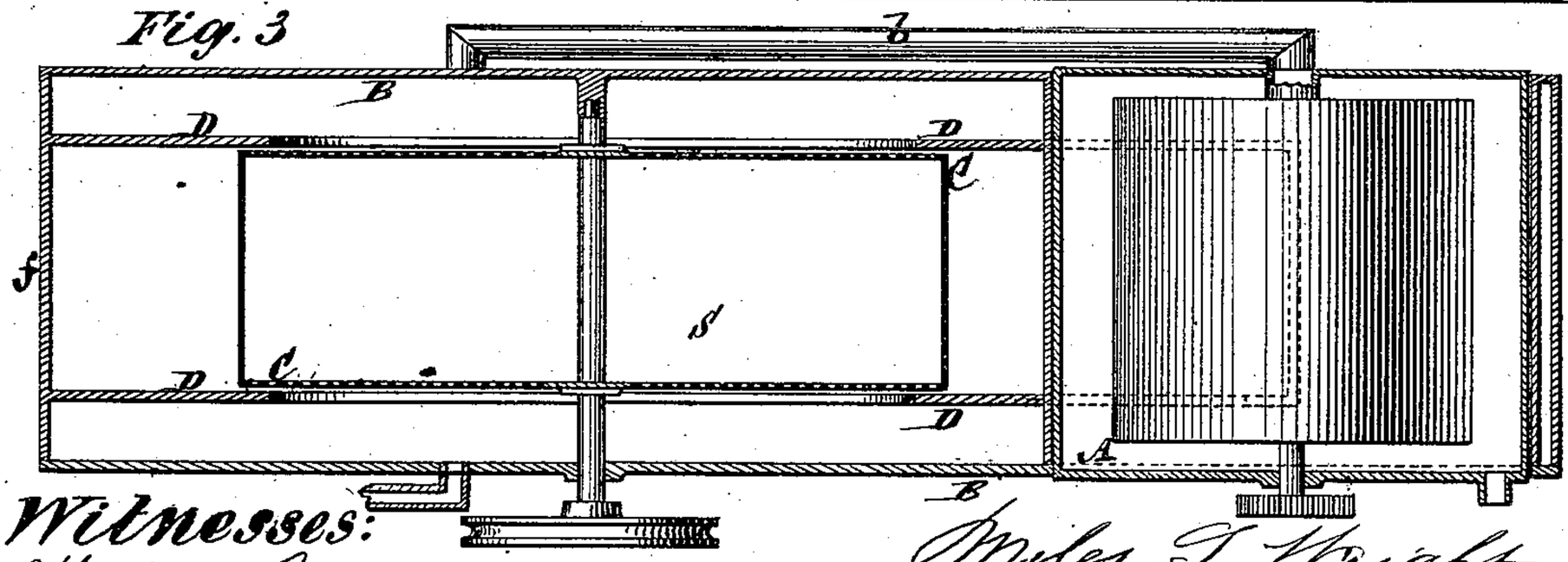


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

MILES S. WRIGHT, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO JAMES D. MERRITT, OF SAME PLACE.

CARBURETER.

SPECIFICATION forming part of Letters Patent No. 226,581, dated April 13, 1880.

Application filed August 25, 1879.

To all whom it may concern:

Be it known that I, MILES S. WRIGHT, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Carbureters, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to apparatus for carbureting air and gas for illuminating purposes, but is more particularly intended for carbureting air, and will here be described accordingly.

The invention consists in combining with a case having an extended gasoline-holding base a reticulated drum and a rotary pump mounted on horizontal shafts, both journaled in or about the same plane, as will more fully hereinafter appear.

The invention further consists of a novel combination of parts whereby the air from the pump is restrained from being blown by the drum without passing through it, as will be more fully hereinafter set forth.

Figure 1 represents a side elevation of a carbureting apparatus constructed in accordance with my invention; Fig. 2, a central vertical longitudinal section of the same; and Fig. 3, a horizontal section thereof, mainly through the center of the perforated or reticulated carbureting-drum.

A is a rotary pump for forcing the air to be carbureted through the carbureting wheel or drum. This pump, which may be of an ordinary or any suitable construction, works on a horizontal axis, and is provided with any proper inlet and outlet, the pipe *b* here indicating the outlet for the air to the carbureting wheel or drum. Said pump is situated at or near one end of the apparatus, and is supported by the same main frame or case, B, which carries the carbureting wheel or drum and forms the chamber or receptacle for the gasoline.

C is the carbureting wheel or drum, which is situated near the opposite end of the case B to that occupied by the pump. This drum is a vertical one—that is, rotates about a horizontal axis—and is constructed with perforated or reticulated sides for the passage of the air forced by the pump through it, the pipe *b* delivering the air from the pump into the case B on one side of the drum C at a point or level a little above the axis of the drum.

The pump may be operated as usual by a falling weight and gears, and the same power be used to rotate the drum by belt from the pump-driving mechanism as shown in the drawings. Said vertical perforated or reticulated drum C is filled with sponge, sawdust, or other absorbent material, S, and works freely within the case B, the lower portion of which latter up to or about the level of the axis of the drum forms a chamber for the gasoline or carbureting liquid, so that the drum is immersed to about half its depth in the latter when the chamber containing the gasoline is fully charged. Thus the air to be carbureted is introduced by the pipe *b*, immediately above the surface of the gasoline on one side of the case B, and is delivered in a carbureted condition after its passage through the perforated drum C by a pipe, *d*, on the other side of said case in like, or approximately-like, relation with the surface of the gasoline—that is, immediately above the latter—when the case is fully charged. This is important to the perfect carbureting of the air, and the vertical construction of the drum C readily provides for it and exposes a large area of reticulated surface for the passage of the air through the absorbent material in the drum, and also insures the submersion in the gasoline of a correspondingly-large area of such drum-surface and amount of absorbent material with which the drum is filled.

By such arrangement of the pipe attachments relatively to the surface of the gasoline and use of the vertical carbureting-drum not only is a large percolating-surface obtained, as above described, but, inasmuch as the vapor from the gasoline which is lifted by the drum condenses and falls during the rotation of the drum, the air entering the case is more thoroughly and perfectly brought in contact with the rich gasoline as said air percolates through the drum and its absorbent filling. The consequence of this is that a good illuminating effect for the carbureted air may be obtained till the bulk of the gasoline in the chamber or case is consumed.

The shaft of the carbureting-drum need only project through one side of the case, and consequently need have but a single stuffing-box. The upper portion of the case B, which covers the drum, may conform in shape to the latter and leave but a contracted space between it and the drum; but otherwise it is desirable to have the case, or, rather, its base portion, which contains the gasoline, of extended dimensions horizontally, in order that the gasoline may be kept at a tolerably-uniform level for a considerable period of time or protracted draft upon said liquid, which is important for the proper operation of the carbureting-drum and ingress and egress of the air, as hereinbefore referred to. Furthermore, the extension of the case B beneath the pump A not only increases the capacity of the gasoline-chamber, but dispenses with a separate support for the pump. Said case is also extended at its other end beyond that portion of it which contains the drum, and such extension is constructed to form a filling-offset, *f*, having a filling-nozzle, *g*, on the same level (or thereabout) as that of the surface of the liquid in the case when the latter is fully charged. This enables the operator to ascertain when the wheel is properly immersed, and prevents all possibility of its too deep immersion. As, however, by the arrangement of the carbureting-drum C in the irregular-shaped case B there would be a liability of the air blowing through the case without passing through the carbureting-drum, I provide the lower portion of said case internally with guards or wings D D on opposite sides of the axis of the drum and on both or reverse sides of the latter, thereby forming partitions in the case in close proximity to the sides of the drum, and more or less conforming to the contour of the latter, so as to restrain the air from passing by the lower half of the drum without restricting the exposure of its sides.

I claim—

1. In combination with the case B, having an extended gasoline-holding base, the reticulated drum C and rotary pump A, mounted on horizontal shafts, both journaled in or about the same plane, whereby extensive holding capacity and extreme compactness are secured, substantially as set forth.

2. The combination, with the case B, having an extended gasoline-holding base, the reticulated carbureting-drum journaled on a horizontal axis, and the rotary pump A, journaled on or about the same plane with the axis of the drum, of the internal guards or wings, D D, on opposite sides of the axis of the drum and on both or reverse sides of the latter, forming partitions in the case B, substantially as and for the purpose herein set forth.

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Witnesses:

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