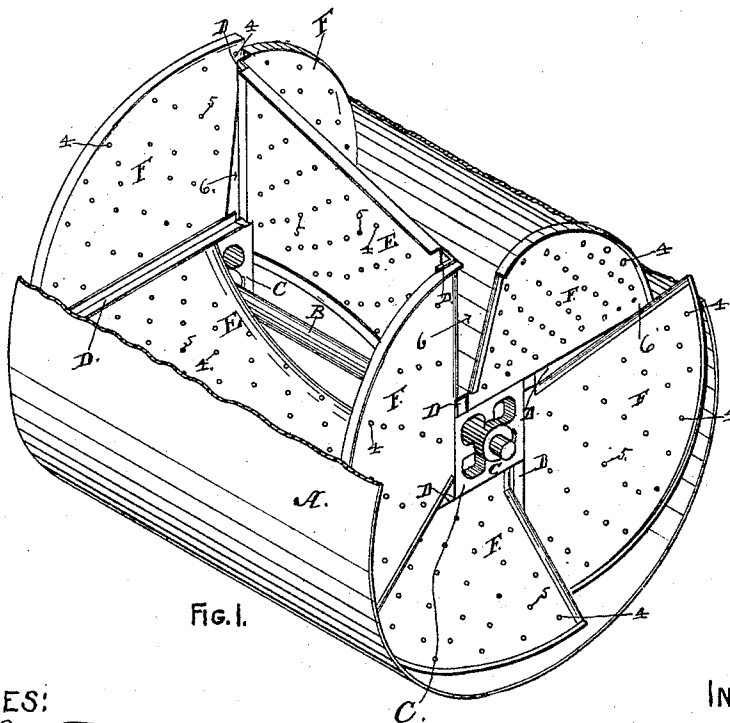
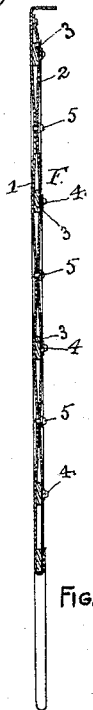
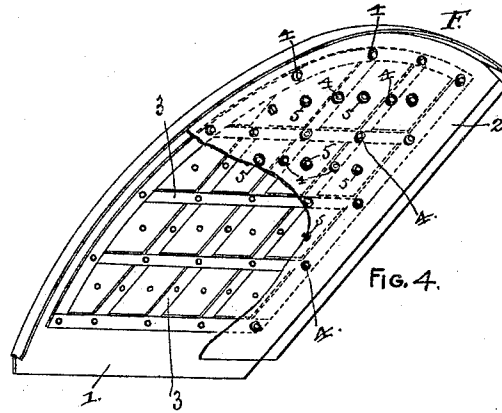
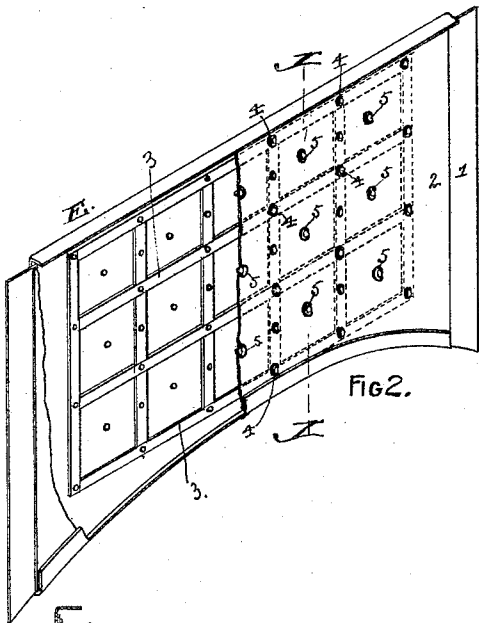


(No Model.)

W. McDONALD.
GAS STATION METER.

No. 460,154.

Patented Sept. 29, 1891.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM McDONALD, OF ALBANY, NEW YORK.

GAS STATION-METER.

SPECIFICATION forming part of Letters Patent No. 460,154, dated September 29, 1891.

Application filed May 12, 1891. Serial No. 392,482. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM McDONALD, of the city and county of Albany, in the State of New York, have invented new and useful Improvements in Gas Station-Meters, of which the following is a specification.

Great difficulty has heretofore been experienced in the construction of station-meters by reason of the liability of the wings of the revolving cylinder to become cracked and broken from the frequent changing of the pressure from one face of the wing to the face on the opposite side of the same, whereby the metal is bent alternately in opposite directions to produce a disintegration of the same on the line of flexure. These wings in the larger station-meters require to be of great size, and owing to the low degree of pressure of the gas it is most desirable that the weight of the revolving cylinder should be as light as possible consistent with the required strength; and the object of my invention is to provide a construction that will combine a maximum of strength with a minimum of weight. This object I attain by the means illustrated in the accompanying drawings, which are herein referred to and form part of this specification, and in which—

Figure 1 is a perspective view of the revolving cylinder of a station-meter detached from the outer casing, the upper part of said cylinder being broken away to show contained parts. Fig. 2 is a perspective view of one of the wings, with part of one of the side plates broken out to show the contained lattice-frame. Fig. 3 is a vertical section of the same at the line X X, and Fig. 4 is a perspective view of one of the end sections with part of one of the side plates broken out for the purpose of showing the contained lattice-frame.

As represented in the drawings, A designates the revolving cylinder of a gas station-meter, which is fitted to revolve within a stationary cylindrical casing. (Not shown in the drawings.) Said cylinder consists of a central shaft B, provided with a pair of rectangular heads or spiders C, which are secured thereto so that their sides will range in line with each other. To each of said heads four angle-shaped arms D are attached in such manner that each will project in line

with the side to which it is attached, so as to be tangential to a circle of equal diameter to said heads. The arms attached to one of said heads being on the opposite edge of the head on the other end of the cylinder, so that a line drawn from the arms projecting at the corresponding side of the heads will form a diagonal to the center line of shaft B, said arms afford the means for attaching the wings of the revolving cylinder thereto.

The construction above described is old and well known and forms no part of my invention.

E designates the side or main wings of the revolving cylinder A, and F the segmental or end wings of said cylinder. Said wings are composed of two side plates 1 and 2, made of sheet metal, with an interposed lattice-frame 3 between them to hold them apart. Said plates are secured to the lattice-frame by means of fastenings or rivets 4, that pass through both side plates and the lattice-frame. The parts of the side plates covering the openings of the lattice-frame are drawn against or toward each other, as shown in Fig. 3, by means of bolts or rivets 5, so that each of said side plates will form a counter-brace to the other, and thereby a very rigid and inflexible wing can be produced by the use of light-weight side plates. The wings E are secured to the arms D in such manner that they will extend diagonally from one end of the cylinder B to the opposite end, and one of the wings F is attached to arms D at each end of the side wings at nearly a right angle, but extended from opposite faces of said side wing. The end wings F are made sufficiently long to allow one end to slightly overlap the nearest end of the next end wing, and said end wings are inclined outwardly from the ends of the cylinder A, so as to form a passage 6 between two succeeding wings. Said passages open in opposite directions at opposite ends of the cylinder A, so as to form inlet-openings for the gas to enter the cylinder at one end of said cylinder and outlet-openings for the emission of the gas at the opposite end of the cylinder. The wings E and F are all secured at their outer ends to the inner side of the cylinder A by gas-tight joints. By said wings the cylinder A is divided into four compartments of approximately the same capacity.

The lattice-frame 3 is preferably made of light bars of flat wrought-iron, which are usually arranged to form quadrangular openings or panels or a combination of quadrangular openings with other forms suitable for the purpose; but, when preferred, said lattice-frame may be made of cast metal to form any desired form of openings therein.

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

A gas station-meter provided with a revolv-

ing cylinder divided into compartments by means of wings formed of plates of sheet metal secured to opposite sides of a lattice-frame, the latter containing openings or panels and the side plates being drawn toward each other in said openings, as and for the purpose herein specified.

WILLIAM McDONALD.

Witnesses:

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