

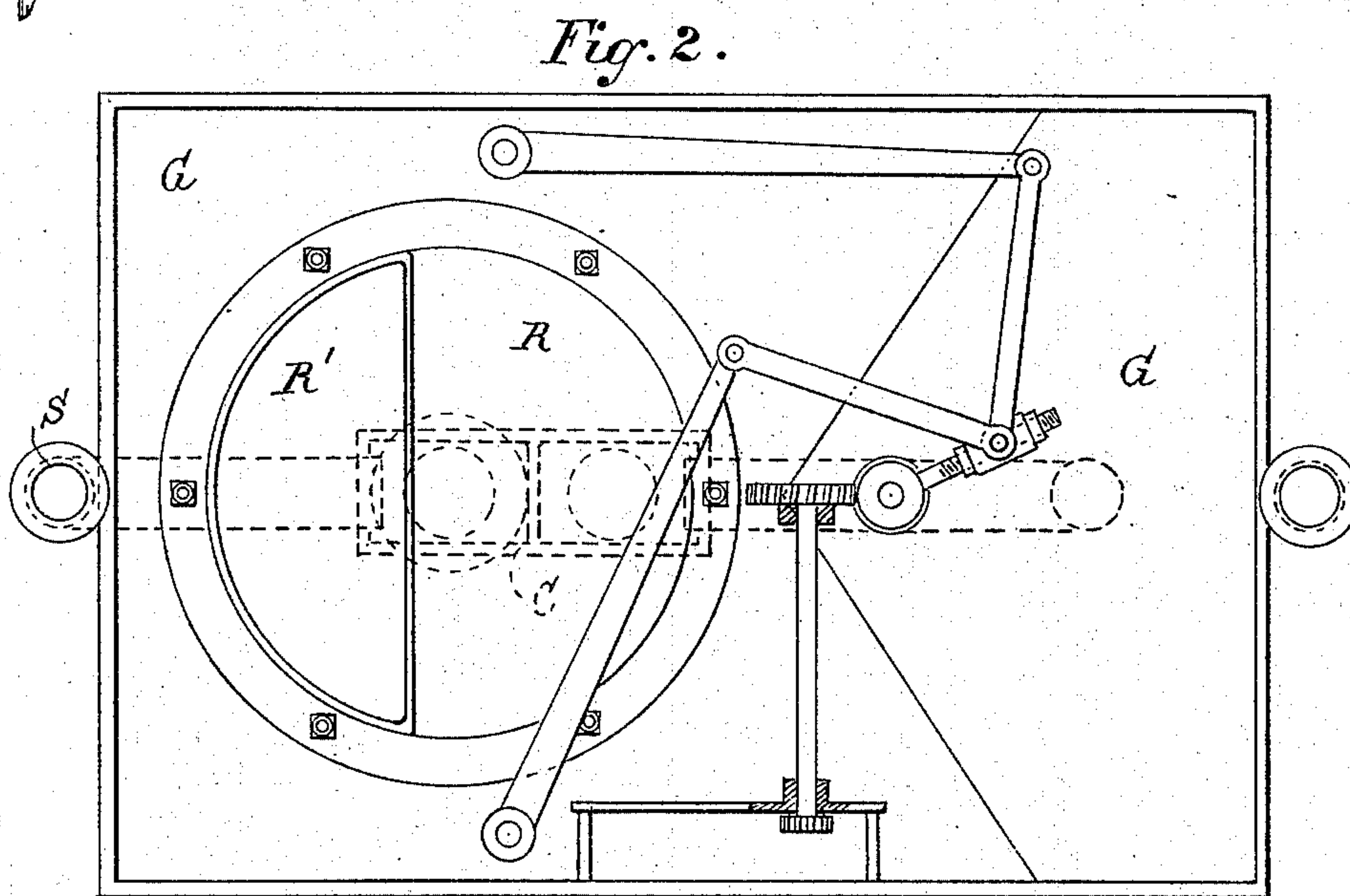
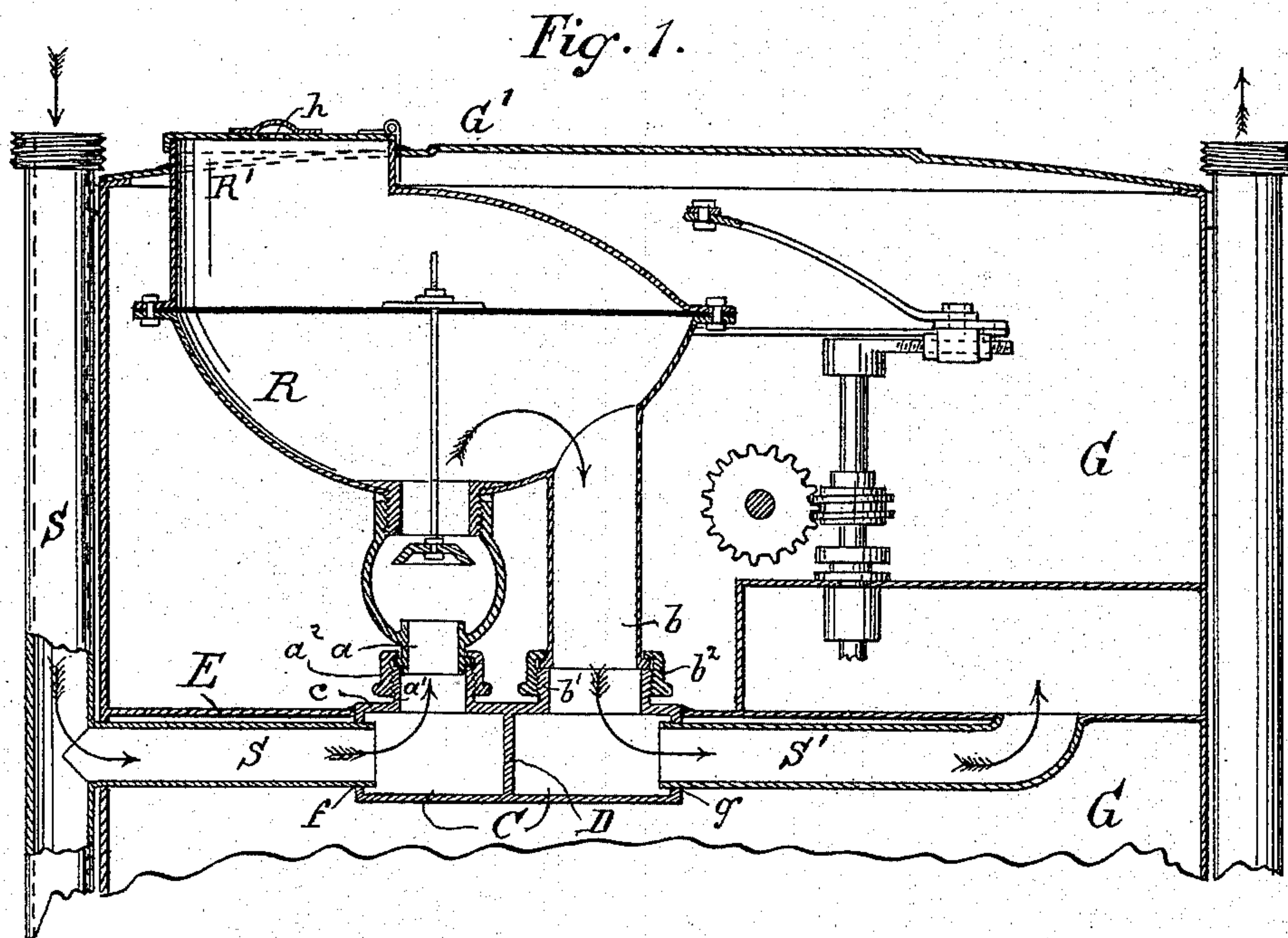
(No Model.)

J. COONS.

COMBINED GAS METER AND GAS REGULATOR.

No. 573,863.

Patented Dec. 29, 1896.



Witnesses:

Philip J. Ryan.
Peter Rogers.

Inventor:

James Coons
per Charles Raettig
his Attorney.

UNITED STATES PATENT OFFICE.

JAMES COONS, OF NEW YORK, N. Y.

COMBINED GAS-METER AND GAS-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 573,863, dated December 29, 1896.

Application filed July 10, 1896. Serial No. 598,636. (No model.)

To all whom it may concern:

Be it known that I, JAMES COONS, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in a Combined Gas-Meter and Gas-Regulator, of which the following is a specification.

My invention relates to improvements in a combined gas meter and regulator; and the objects of my invention are to relieve the constant fluctuating pressure upon the diaphragm of a meter and at the same time to deliver automatically gas to burners at any desired pressure below that in the street-main. I attain these objects by a combination of parts hereinafter described, and illustrated in the drawings, of which—

Figure 1 is a longitudinal section and elevation of the upper portion of a combined gas meter and regulator, showing the improvement. Fig. 2 is a plan view of Fig. 1 with the covers removed.

Similar letters refer to similar parts throughout both views.

A gas-regulator R of any desired pattern or design is shaped in such a manner that it can be inserted and partially fill the open space left in the top chamber of gas-meters, which is partially occupied by the oscillating levers and the crank actuating the registering apparatus, and the gas-inlet pipe *a* and the gas-outlet pipe *b* are arranged parallel to each other at the bottom of the gas-regulator, and are provided at their lower extremities with flanges by means of which they can be tightly secured to the hollow studs *a'* and *b'*, projecting from the top of a trough-like closed casting or separation-chamber C, which is preferably soldered in a central position to the wall E, separating the lower and upper chamber of a gas-meter G, an opening having previously been cut into the wall E corresponding in size exactly with the size of the upper wall *c* of the casting C, and the central portion of the gas-supply channel of the gas-meter having been removed to make place for the body of this separation-chamber C.

The ends of the chamber C are provided with openings *f* and *g*, into which the two sections *s s'* of the gas-supply pipe of the gas-

meter are secured, preferably by the soldering process. Half-way between the studs *a'* and *b'* and parallel to the end walls a central partition D is provided in the separation-chamber C, as shown in Fig. 1 of the drawings.

The open top R' of the gas-regulator R, which for constructive reasons is preferably shaped like a hollow semicylinder, slightly projects beyond the top cover G' of the gas-meter, to which it is firmly secured by soldering, and is provided with a removable cover having a protected opening *h* for the admission of the air.

The proceedings in fitting the apparatus are then as follows: The casting C having been soldered to the wall E of the gas-meter in a position described above and shown in the drawings, and the ends of the broken gas-supply pipe *s s'* having been secured thereto in the manner described, the gas-regulator is attached thereto by securing the flanged ends of the pipes *a* and *b*, respectively, to the studs *a'* and *b'* by means of the screw-threaded nuts *a² b²*, as shown in Fig. 1 of the drawings. The levers are then connected and the cover G' of the gas-meter is slipped over the top R' of the gas-regulator, and the cover G' is then made air-tight by soldering it to the body of the meter and around the semicylindrical opening to the top R' of the gas-regulator, and the apparatus is ready for work.

The gas will pass from the supply-pipe S into one side of the separation-chamber C, and from there through the pipe *a* into the gas-regulator R. It will leave this regulator at a reduced pressure through the pipe *b* and pass to the other side of the chamber C and from there through the pipe *s'* into and through the gas-meter G. Thus the bellows of the gas-meter will be actuated by an equal reduced pressure considerably less than the pressure in the street-main, and the life of a gas-meter, or the time which it is capable of serving, will be greatly prolonged, causing a great saving of expense, while the feature of a smooth regular gas-supply to the burners is preserved without requiring extra space and additional pipe-fittings.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a combined gas-meter and gas-regulator, a gas-meter casing G having a separation-wall E with a chamber C having the studs a' and b' , a gas-supply pipe s and a cover G' having a semicylindrical opening, in combination with a gas-regulator R having below the parallel gas-ducts a and b and the nuts a^2 and b^2 and above a hollow semicylindrical projection R' provided with an air-hole h as

and for the purposes herein shown and set forth.

Signed at New York, in the county of New York and State of New York, this 8th day of July, A. D. 1896.

JAMES COONS.

Witnesses:

HENRY C. MECKLEM, Jr.,
AUGUST RITTER.