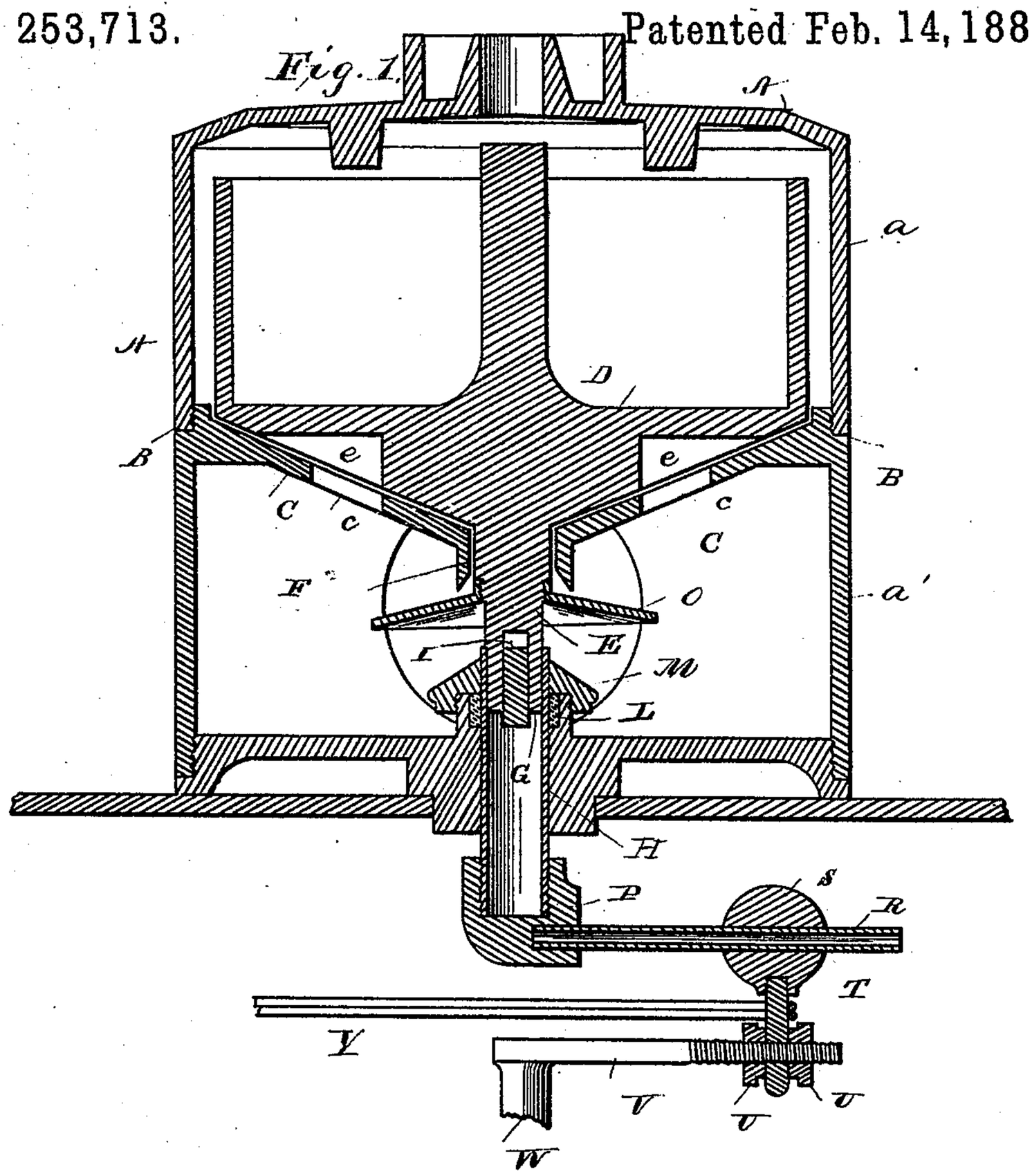
(No Model.) 2 Sheets—Sheet 1.

W. M. JACKSON.

OIL DISTRIBUTING MECHANISM FOR CARBURETORS.

No. 253,713. Patented Feb. 14, 1882.

Fig. 1.



Witnesses,
Edwin L. Yewell,
J. J. McCarthy.

Inventor,
Walter M. Jackson.
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his Attorney.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

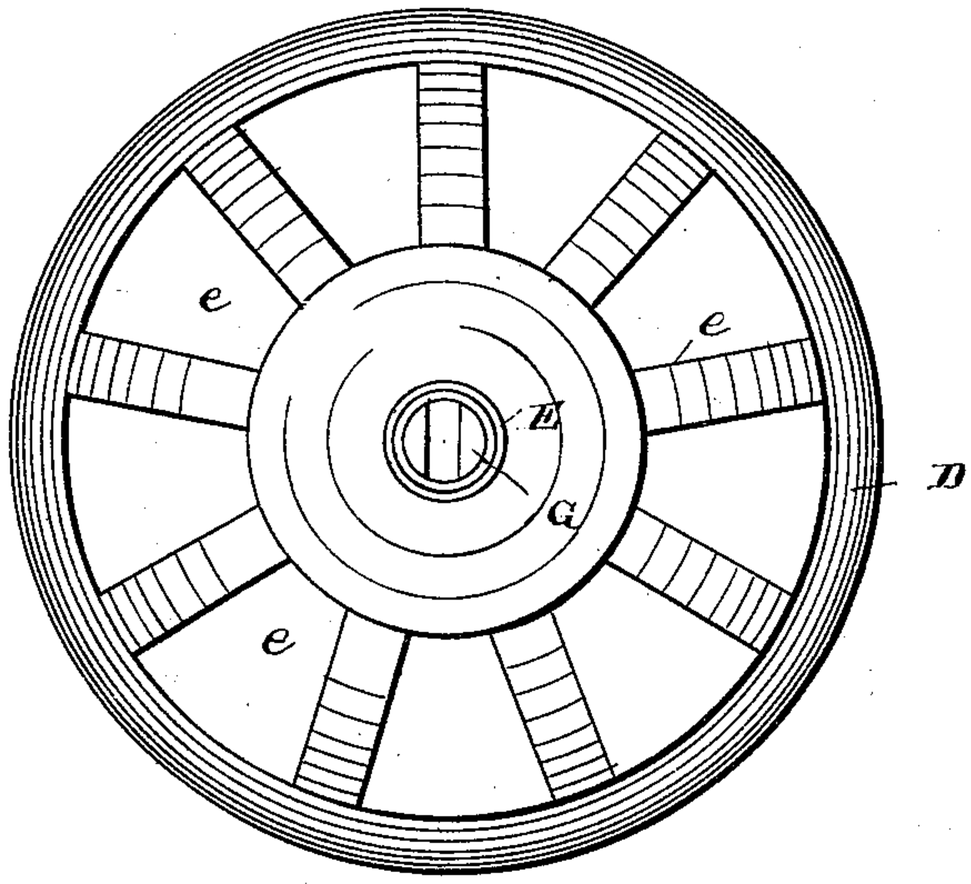
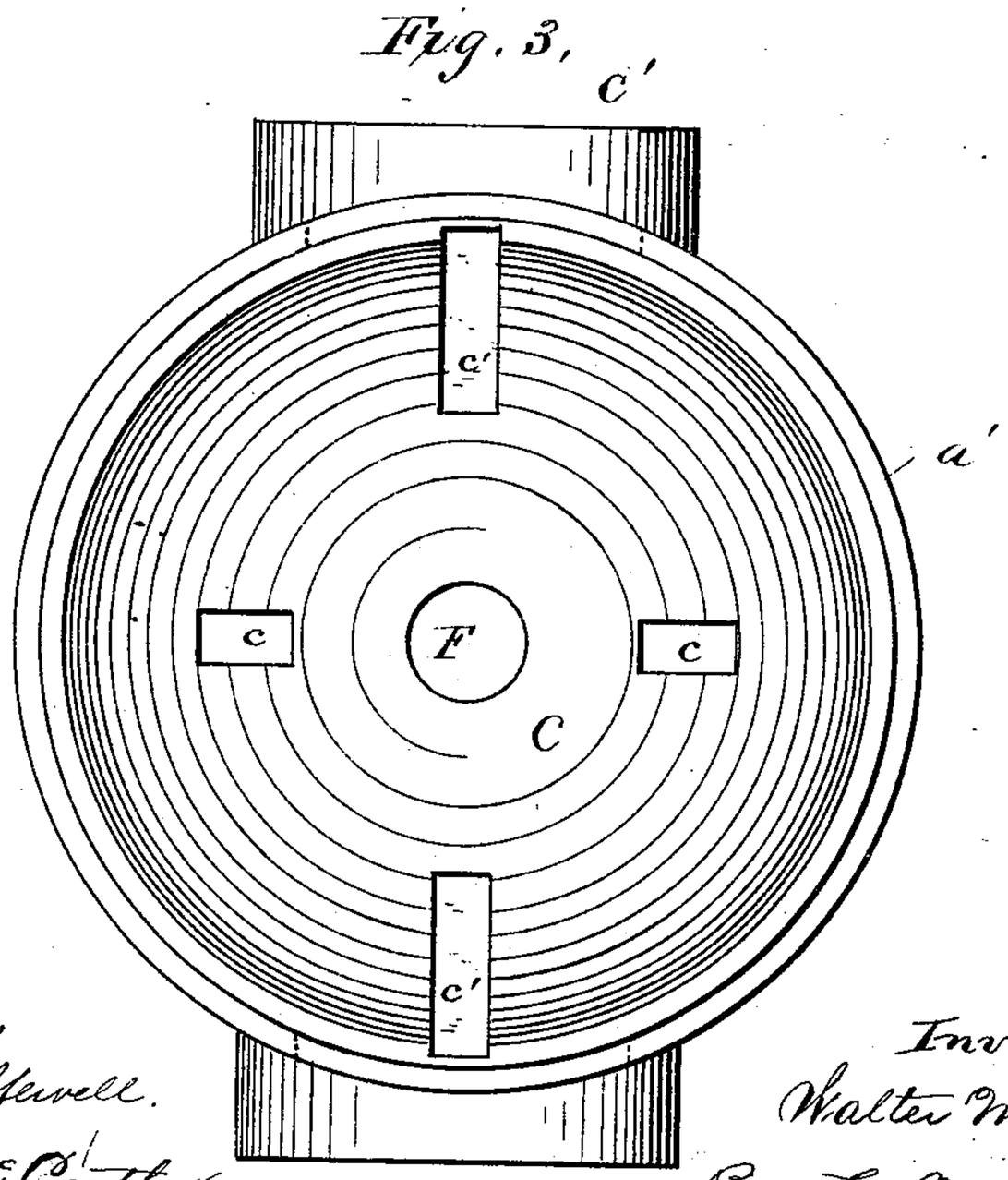


Fig. 3.



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his Attorney.

UNITED STATES PATENT OFFICE.

WALTER M. JACKSON, OF PROVIDENCE, RHODE ISLAND.

OIL-DISTRIBUTING MECHANISM FOR CARBURETORS.

SPECIFICATION forming part of Letters Patent No. 253,713, dated February 14, 1882.

Application filed October 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, WALTER M. JACKSON, of Providence, in the county of Providence, and in the State of Rhode Island, have invented certain new and useful Improvements in Oil-Distributing Mechanism for Carburetors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in distributing mechanism for carburetors; and it has for its objects to provide suitable means and devices whereby the hydrocarbon fluid may be metrically supplied to the carburetor by the action of the meter in conjunction with positive mechanism adapted to operate a suitable valve without the use of the usual gearing, as more fully hereinafter specified. These objects I accomplish by the apparatus and mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical sectional view of my improved apparatus; Fig. 2, a view showing the face of the valve which regulates the supply of hydrocarbon fluid to the carburetor; and Fig. 3, a detached view of the valve-casing with the valve and top removed, showing the face of the valve-seat.

The letter A indicates the valve-casing and carbureting-chamber, which are constructed of metal or any other suitable material, preferably in cylindrical shape, and in two united sections, *a a'*, secured together by means of a screw-threaded joint, B, or in any other convenient manner. The upper or valve chamber is provided with an inclined, conoidal, or beveled valve-seat, C, through which extend the ports *c*, as indicated in Figs. 1 and 3 of the drawings.

The letter *c'* indicates two radial recesses in the face of the valve-seat, which are located midway between the ports *c* and diametrically opposite each other. The said recesses extend about half-way from the center to the edge of the seat, as indicated in Fig. 3. The ports C are located about half-way between the center and edge of the seat, as indicated in Figs. 1 and 3 of the drawings.

The letter D indicates a valve which has an inclined, conoidal, or beveled face, and which is adapted to set upon the valve-seat C and rotate freely thereon. The said valve on its face is provided with a series of radial recesses, *e*, which extend from about half-way from the center to near the edge of said valve, for the purpose more fully hereinafter specified. The valve is constructed in the form of a shell or annular vessel, and is of a diameter somewhat less than the casing, in order to leave a space between its outer wall and the inner wall of the shell, through which the hydrocarbon may pass from above to the recesses in the valve and valve-seat. The hollow portion of the valve is filled with lead or otherwise weighted, so as to hold it to its seat against any pressure of gas or air from below.

The letter E indicates a valve-stem, which extends downwardly from the center of the valve through a central tubular opening, F, in the valve-seat. The lower end of the said stem is slotted, as indicated, and is adapted to set into the upper end of a vertical tubular shaft, G, journaled in a bearing, H, centrally located at the bottom of the lower section of the valve-casing. The slotted portion of said stem is adapted to set over a bridge, I, secured in the upper end of the tubular shaft G, which extends through a packing, L, and a gland or screw-cap, M, which has a conoidal top, so as to shed any inflowing hydrocarbon and prevent the same from escaping into the meter below. The valve-stem is also provided with a conoidal shield, O, which serves additionally to deflect the hydrocarbon and confine it to the valve-chest.

The lower end of the tubular shaft G is provided with a solid termination, P, from which extends a horizontal tubular rod, R, which passes loosely through an opening in a head, S, swiveled to a pin, T, adjustably secured by means of the nuts U to the screw-threaded end of the horizontal arm V of the vertical shaft W of a meter or other measuring device.

The letter Y indicates one of the parallel guide-rods of the meter, which is swiveled to the pin T.

The letter A' indicates the top or cover of the valve-casing. This is provided with an annular boss, which may be connected with a pipe leading from a suitable hydrocarbon-res-

ervoir. The space is for the purpose of collecting any solid impurities which may settle from the liquid hydrocarbon on its passage to the valve-casing, and thus prevent injury to the valve and valve-seat.

The letter *a'*, as before mentioned, indicates the carbureting-chamber, and C' and D' the induction and eduction pipes for the gas or air. The induction-pipe may be suitably connected with the meter, so as to receive the measured gas or air passing through the same, and eduction-pipe connects with the main leading to the burners, as usual.

The operation of my invention is as follows: The hydrocarbon fluid is admitted through the central boss at the top from a suitable reservoir, and flows down at the sides of the valve. As the valve is rotated the hydrocarbon, which enters successively the recesses in the valve-face through the recesses in the seat, is carried around and discharged into the chamber below in measured quantities, depending upon the volume of gas passing through the meter which actuates the valve. It will be perceived that as the horizontal arm on the central shaft of the meter is rotated the swiveled head will carry the arm of the central valve-shaft, and thus operate the valve without the usual gearing.

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

1. In combination with the carbureting-chamber, the valve-ch
clined conoidal or bevel
and recesses, as described,
ing an inclined conoidal or b
series of radial recesses, subs
fied.

2. In combination with the v
carburetor, the valve and valve-
with recesses and ports, as descri
stem and vertical rotating sha
means for detachably connecti
stantially as and for the purpos

3. In combination with the v
and carburetor and the valve an
provided with ports and recesses, as desc
the conoidal shield or distributer secure
the valve-stem, substantially as and for th
purposes set forth.

4. In combination with the vertical shaft which actuates the valve and the horizontal arm secured thereto, the central meter-shaft and its horizontal arm and the swiveled head secured thereto, through which head passes loosely the arm of the valve-actuating shaft, whereby the valve is operated without the use of ordinary gearing, substantially as specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 14th day of October, 1881.

WALTER M. JACKSON.

Witnesses:

C. A. NEALE,

H. AUBREY TOULMIN.