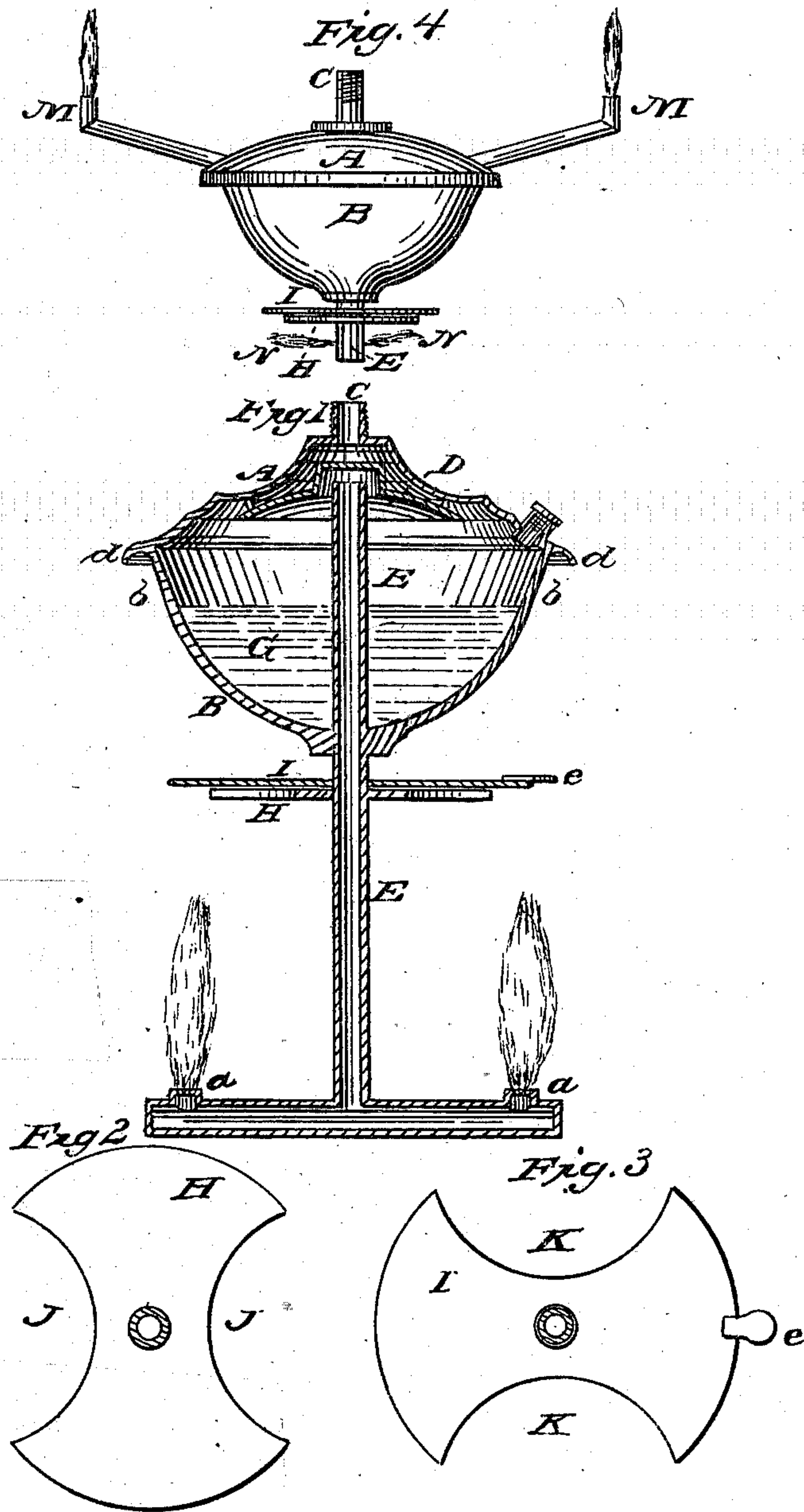


J. KIDD.  
Carbureter.

No. 83,289.

Patented Oct. 20, 1868.



WITNESSES:  
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# United States Patent Office.

JOSHUA KIDD, OF NEW YORK, N. Y.

Letters Patent No. 83,289, dated October 20, 1868.

## IMPROVED APPARATUS FOR CARBURETTING GAS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, JOSHUA KIDD, of the city, county, and State of New York, have invented a new and useful Improvement in Apparatus for Carburetting Gas; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a sectional elevation of my invention, the section being taken through the axis of the same.

Figures 2 and 3 are detail plan views of the intercepters.

Figure 4 is a side view of a modification, wherein the illuminating-burners are arranged above the carburetting-vessel, which is provided with orifices for small heating-jets below.

Similar letters of reference indicate corresponding parts.

This invention embodies certain improvements upon an invention for which Letters Patent of the United States, No. 62,855, were granted to me on the 12th day of March, 1867.

The said improvements consist in the form of the carburetting-vessel, and the interposition of intercepters or disks between the jets or burners and the carburetting-vessel.

In the Letters Patent above mentioned, a carburetting-vessel was employed which contained creosote, or any other heavy fixed oil or non-volatile hydrocarbon.

Common burning-gas was admitted within the carburetting-vessel, and allowed to mingle with gas or vapor evolved by heat from the creosote, or its equivalent.

The heat for evolving such gas was obtained from the ignited jet of the commingled gas and vapor, which jet or jets were arranged under the carburetting-vessel, which thus received heat from the said gas-jet.

The power and brilliancy of gas carburetted in the manner described being much increased, the apparatus provided a cheap and effective means of illumination; but in order to render its operation perfect, the creosote, or its equivalent fluid, must be heated and vaporized at or near the top of its vertical column, as otherwise a residual or tarry deposit would result.

In order to provide for this condition, the carburetting-vessel of the said Letters Patent was formed with a central conical chimney, which passed up through the column of fluid in the said vessel, and was provided with a heat-interceptor at or above the top of the said chimney. The heat from the gas, flame, or flames acted upon the upper part of the chimney, which imparted the heat thus acquired to the adjacent surface of oil surrounding it.

The present invention consists in forming the car-

buretting-vessel without the central chimney, and employing an interceptor interposed under the said vessel, and between it and the gas-flame.

The carburetting-vessel can thus be more easily made, and therefore furnished at a less cost than those having the chimneys before mentioned.

The operation and advantages of this form will be more apparent by referring to the drawings, in which—

A B is the carburetting-vessel, being composed of two pieces of sheet-metal spun up to the desired form, and united. The form of the part A is not of especial moment, but the part B, which contains the creosote, (or other oil,) should be or approximate more or less to a hemispherical vessel, or a vessel having a convex form or external surface.

C is the tube for the entering gas, which latter, in entering, is distributed and diffused by the disk D, so that it may the more readily commingle with the gas or vapor evolved from the oil or creosote, G. This product then passes down the tube E, and out at the orifices or burners *a*, and is ignited.

But for the intercepters H I, the heat from the jets would heat the bottom part of B as much as or more than the upper part, and a tarry deposit would result, which would soon unfit the apparatus for use. But by the interposition of the intercepters, the heat is screened from the lower part of the carburetting-vessel, and suffered only to act upon the part *b b*, just under the ledge or projecting annular lip *d*, which latter serves to reflect the heat somewhat against the part *b b*.

The carburetting-fluid is thus heated at the top of its vertical column quite as effectively as when the central chimney is employed, while the cost of the apparatus is much reduced.

The interceptor may be constructed in various ways, and I desire to be understood as limiting myself to the one shown in the drawings, as my invention contemplates the use of an interceptor or screen of any suitable form or construction.

I have devised a convenient one, which is capable of being adjusted to permit a greater or less quantity of heat to act upon the carburetting-vessel. It consists of two disks, H and I, arranged one above the other, the lower one, H, being affixed to tube E, while the other, I, turns loosely upon it.

The perimeter of each of these disks is indented, or cut away, as shown at J J, K K, and when the disk I is turned, to bring its indented profile K K to coincide with those of the disk H, the heat will act with the greatest permissible effect upon the carburetting-vessel A B. By turning these said indentations away from coincidence, (either wholly or partially,) the heat will be correspondingly screened from the carburetting-vessel.



*e* is a handle or finger-plate, for turning the disk *I*.  
*L* is the device for supplying the carburetting-vessel with oil.

At fig. 4 is shown a modification of the apparatus, wherein the main or illuminating-burners *M M* are arranged above the carburetting-vessel, and the lower burners are employed to supply small heating-jets, *N N*.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The combination of intercepters, as *H I*, or any other suitable form or construction, interposed between the carburetting-vessel *A B* and the burners of the same, to screen the heat from the lower part of

the said vessel, and deflect it so as to act on or near the surface of the contained oil or carburetting-fluid, all substantially as shown and described, and for the purpose set forth.

2. The reflecting lip *d*, substantially as described, in combination with the carburetting-vessel *A B* and interceptor *H I*, all as set forth.

The above specification of my invention signed by me, this 21st day of September, 1868.

JOSHUA KIDD.

Witnesses:

FRANK BLOCKLEY,  
ALEX. E. ROBERTS.