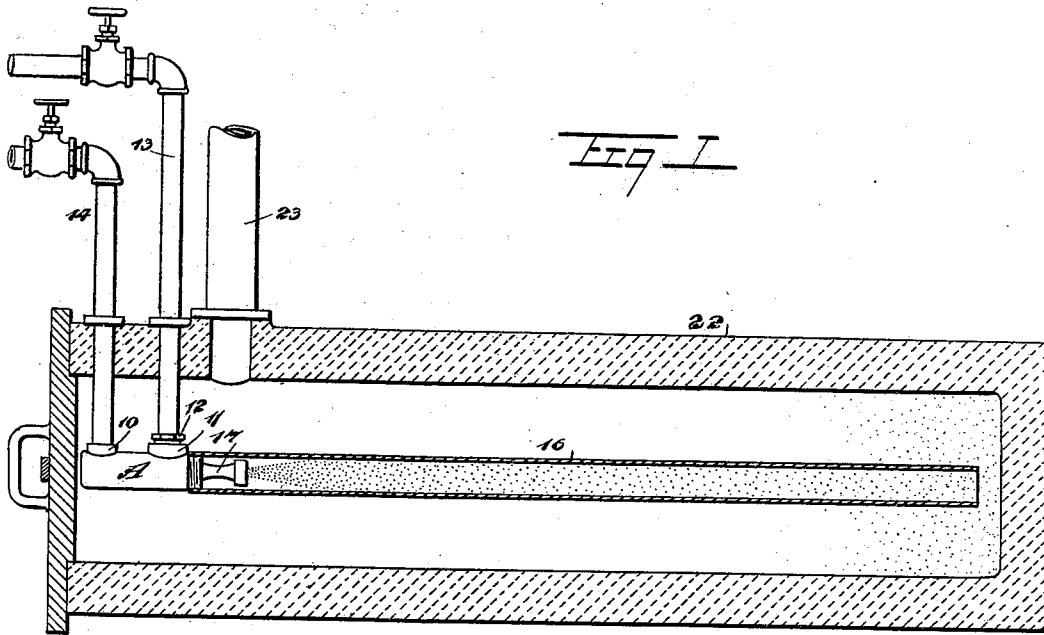
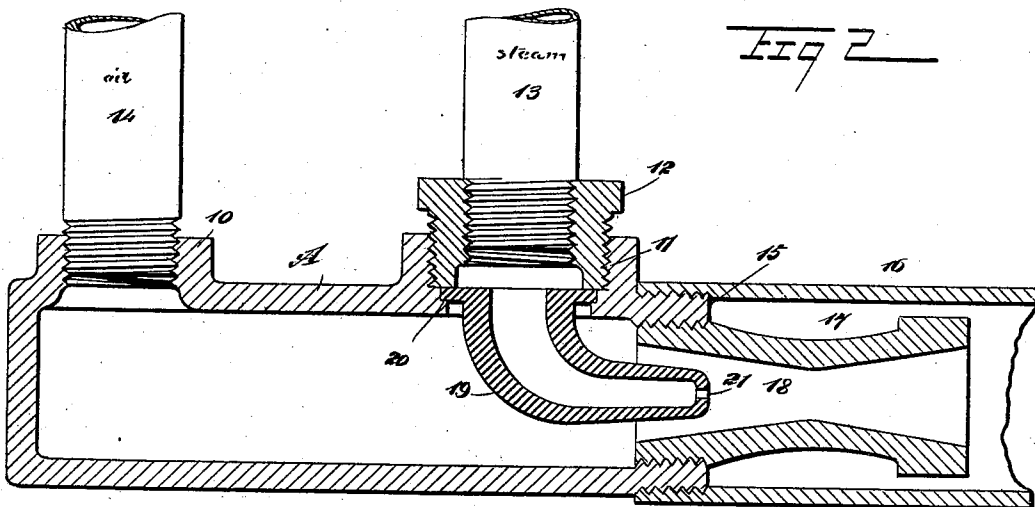


(No Model.)

J. H. BAKER.
GAS APPARATUS.

No. 592,185.

Patented Oct. 19, 1897.



WITNESSES:
H. Walker
J. H. Baker

INVENTOR.
J. H. Baker
BY *Munnell*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH H. BAKER, OF BROOKLYN, NEW YORK.

GAS APPARATUS.

SPECIFICATION forming part of Letters Patent No. 592,185, dated October 19, 1897.

Application filed October 5, 1896. Serial No. 607,894. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. BAKER, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Oil-Gas Apparatus, of which the following is a full, clear, and exact description.

The object of my invention is to provide a device whereby oil and steam will be perfectly commingled and atomized in an atomizer within a retort, and delivered in its atomized state within the retort, to produce a speedy, effective, and economic conversion of the two factors into an illuminating-gas.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures.

Figure 1 is a longitudinal vertical section through a retort and through a portion of the device, other portions of the latter being shown in side elevation; and Fig. 2 is an enlarged vertical longitudinal section through the main portion of the attachment to the retort.

In carrying out the invention the device consists of a casing A, which is preferably of cylindrical form and of any desired length and dimensions, the said casing being provided with attached nipples 10 and 11 in its upper surface. The nipple 11 ordinarily receives a bushing 12, into which a pipe 13 is screwed and through which steam is to be conducted. The nipple 10 receives a pipe 14, through which oil is introduced into the casing.

The casing is open at one end, and at the said open end a collar 15 is formed, which is exteriorly and interiorly threaded. A conducting-pipe 16, of suitable length, is screwed upon the exterior threaded portion of the collar 15, while a distributing-nozzle 17 is screwed upon the interior portion of the aforesaid collar, as is best shown in Fig. 2. The distributing-nozzle is made to converge at its center, the bore or interior chamber 18 of the nozzle

end, the end portions of the bore or chamber of the nozzle being of greater diameter than the diameter at its center.

An atomizing-nozzle 19 is secured in the nipple 11, which is adjacent to the distributing-nozzle, and the aforesaid atomizing-nozzle extends a predetermined distance within the distributing-nozzle, being provided at its upper or outer end with a flange 20, usually engaged by the bushing 12, and at the inner end of the said atomizing-nozzle an orifice 21 is formed.

In practice the casing and its distributing-tube 16 are located within a retort 22, the steam-pipe 13 and oil-pipe 14 being carried through the retort to a suitable connection with the casing, while the usual gas-offtake pipe 23 is connected with the interior of the retort, as illustrated in Fig. 1. The oil enters the casing and is delivered into the distributing-nozzle 17, where it is met by a jet of steam from the pipe 13 passing through the atomizing-nozzle, and the steam and oil are commingled in the distributing-nozzle and atomized at the same time, and is forced out through the distributing-pipe 16 into the retort, where the two factors in their commingled and atomized condition will be subjected to heat and economically and quickly converted into a gas suitable for illuminating purposes.

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

1. In an oil-gas apparatus, a casing adapted to be introduced into a retort, said casing being closed at one end and provided in one side at its closed end with an oil-inlet and near its open end with a steam-inlet, a distributing-nozzle secured to and projecting from the open end of the casing, and a curved atomizing-nozzle secured in the steam-inlet and projecting into the distributing-nozzle, substantially as described.

2. In an oil-gas apparatus, a casing adapted to be introduced into a retort, said casing being closed at one end and provided with steam and oil openings in its side, a conducting-pipe secured to the open end of the casing, a distributing-nozzle secured to the said open end of the casing and projecting into the conduct-

ing-pipe, and a curved atomizing-nozzle secured in the steam-inlet and projecting into the distributing-nozzle, substantially as described.

- 5 3. In an oil-gas apparatus, the combination with a casing having its open end interiorly and exteriorly threaded and provided in its side with nipples for the attachment of steam and oil supply pipes, a conducting-tube
10 screwed upon the exterior of the casing, a distributing-nozzle screwed into the interior of

the said casing and projecting into the conducting-tube, and an atomizing-nozzle provided with a flanged outer end and seated in the steam-nipple, said nozzle being curved 15 and projecting into the distributing-nozzle, substantially as described.

JOSEPH H. BAKER.

Witnesses:

J. FRED. ACKER,
JNO. M. RITTER.