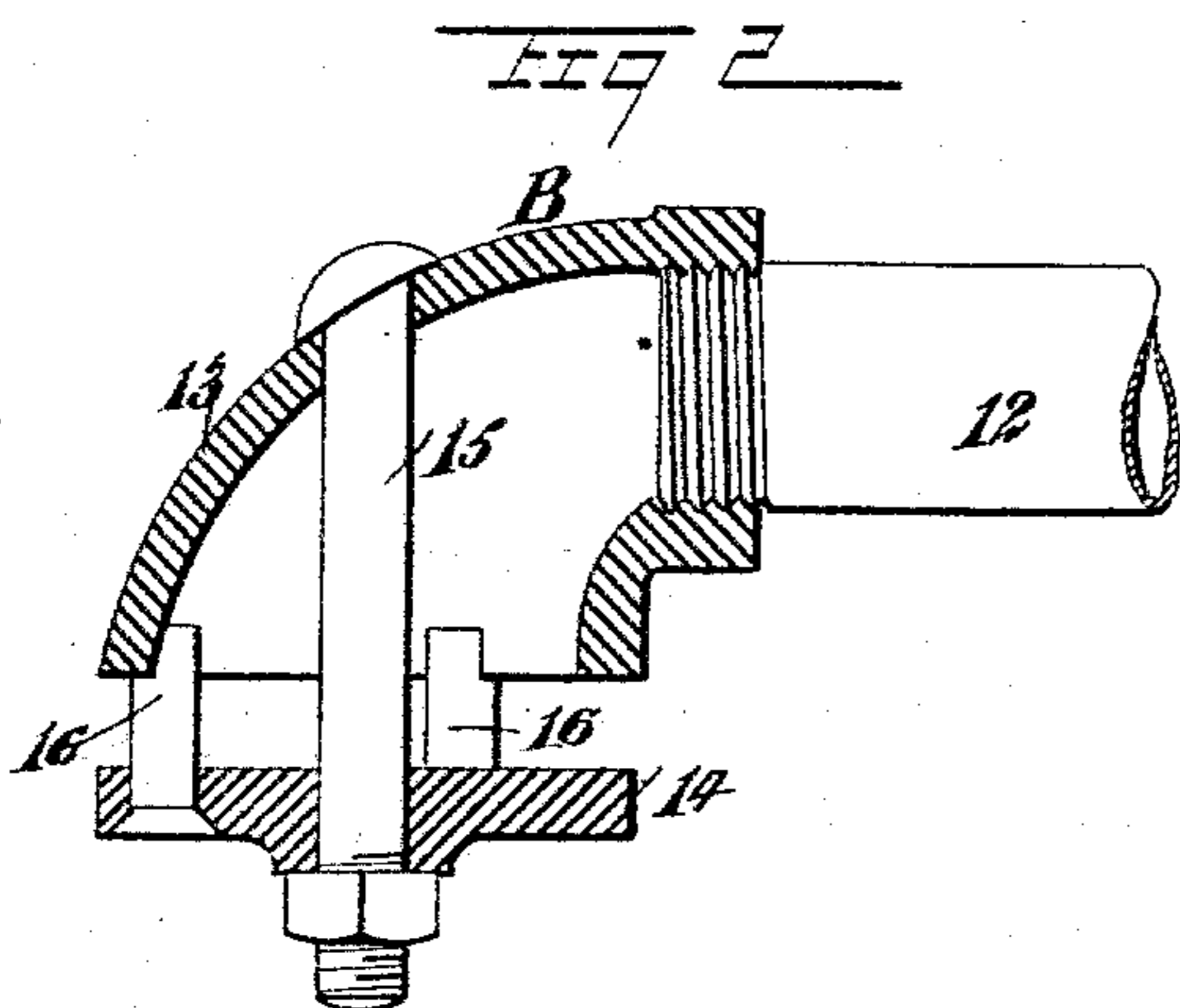
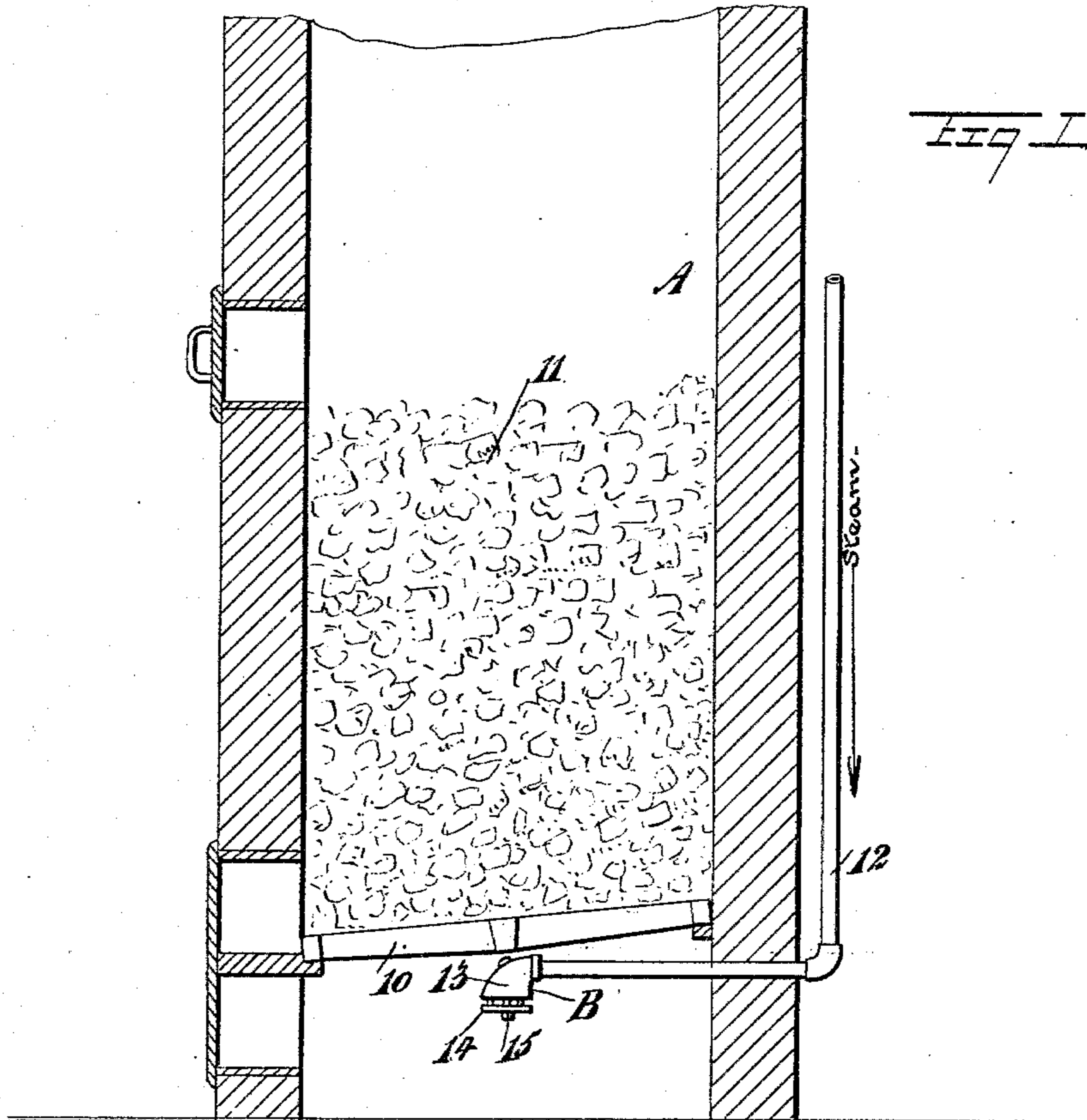


(No Model.)

J. H. BAKER.
STEAM DISTRIBUTER FOR GAS GENERATORS.

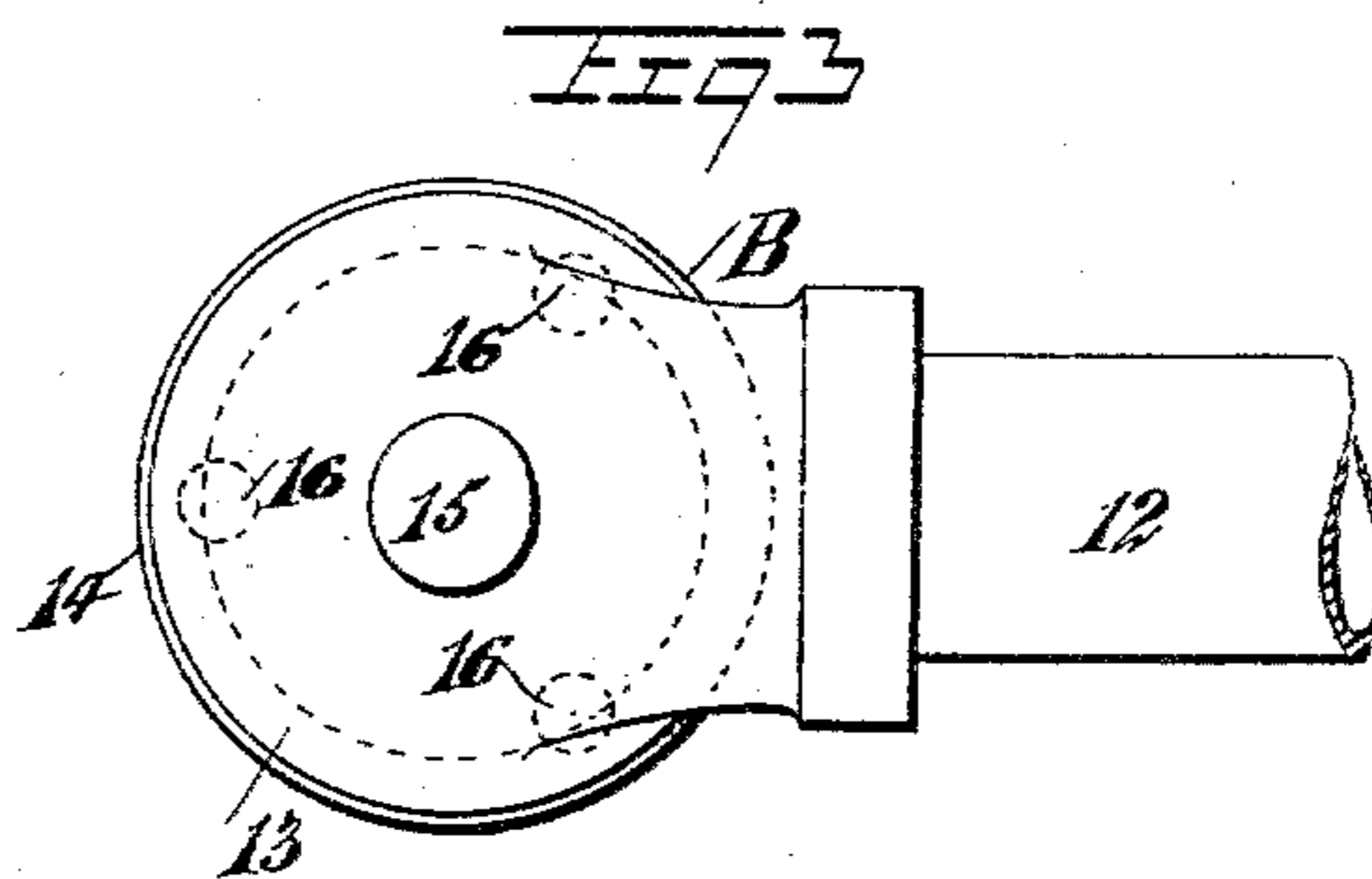
No. 561,752.

Patented June 9, 1896.



WITNESSES:

H. Walker
J. H. Baker



INVENTOR

J. H. Baker
BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH H. BAKER, OF BROOKLYN, NEW YORK.

STEAM-DISTRIBUTER FOR GAS-GENERATORS.

SPECIFICATION forming part of Letters Patent No. 561,752, dated June 9, 1896.

Application filed December 7, 1895. Serial No. 571,360. (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 Improved Steam-Distributor for Gas-Generating Furnaces, of which the following is a full, clear, and exact description.

My invention relates to steam-distributers for gas-generating furnaces.

The object of the invention is to provide for a uniform and even distribution of the steam to the fire of such furnaces and to cause the steam to be supplied to the maximum of fire service and in a dry state, thereby greatly increasing the hydrogen production of the gas-generating furnace over that obtained by the steam-jet usually employed to promote combustion.

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 all the figures.

Figure 1 is a longitudinal vertical section through the fire-box of the gas-generating furnace, illustrating the application of the steam-distributor thereto. Fig. 2 is a vertical section through the distributor, and Fig. 3 is a plan view of the same.

In carrying out the invention the furnace A, of which the fire-box only is shown, may be of any suitable or approved construction, and a grate 10 of any desired type is employed to support the mass of fuel 11. The steam is conducted from a suitable source of supply to a point beneath the fire through the medium of a pipe 12, which is connected with the distributor B, and the said distributor is placed about centrally beneath the grate and as near thereto as possible. This distributor comprises a body 13, which is in the shape of a bonnet casting or forging open at both ends, and its lower end being of much greater diameter than its upper or receiving end. The said bonnet-shaped casting approaches an L in general formation and is adapted at its upper or contracted end to receive the aforesaid steam-supply pipe 12. A disk or plate 14, having preferably a flat upper surface, is located beneath the lower or expanded portion of the body of the distributor, being secured

to the said body by means of a bolt 15 or its equivalent, and the plate or disk is spaced from the lower end of the body through the medium of any desired number of spacing-pins 16, which are preferably headed at their lower ends, being passed through the disk or plate, and recessed at their upper ends to receive the inner lower marginal portion of the body of the distributor, as is best shown in Fig. 2.

In the operation of the improved distributor the steam entering it will strike the upper surface of the plate 14, and the condensed water will pass off from the distributor into the ash-pit, while the dry steam will be deflected upward and will pass through the grate and through the major portion of the volume of fuel. In fact, the deflecting-plate will so spread the steam that said steam will pass up almost as forcibly through the column of fuel at the outside as at any point near the center. In this manner a thoroughly incandescent fire will be obtained, and consequently the supply of hydrogen will be materially increased.

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

1. A steam-distributor for gas-generating furnaces, the same consisting of a body portion having an enlarged and open lower end and having an opening in its side and at its upper portion, a deflecting-plate, a bolt connected to the upper portion of the body portion and holding the deflecting-plate below the open lower end of said body portion, and a series of spacing-pins, said pins being connected to the deflecting-plate and extending upwardly therefrom, the pins having notches in their upper ends, the notches receiving the lower edges of the body portion, substantially as described.

2. A steam-distributor for gas-furnaces, the distributor consisting of a body portion having an open lower end and a steam-inlet opening, a bolt secured to the body portion and projecting below the open lower end thereof, a deflecting-plate held below said lower end by means of the bolt, and means for bracing the deflecting-plate against the lower edges of the body portion, substantially as described.

JOSEPH H. BAKER.

Witnesses:

CHARLES E. TERRY,
WILLIAM O. TATE.