

T. H. MINTIER & H. J. JENNINGS.

GAS BURNER.

APPLICATION FILED FEB. 25, 1909.

Patented Mar. 15, 1910.

951,828.

2 SHEETS—SHEET 1.

Fig. 1

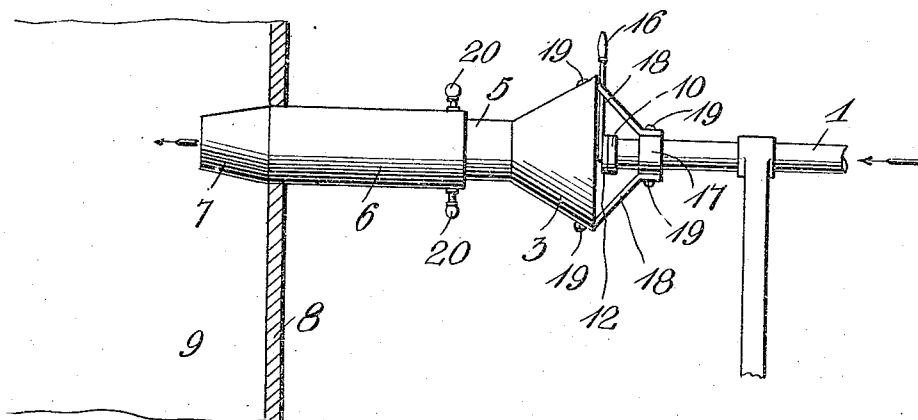
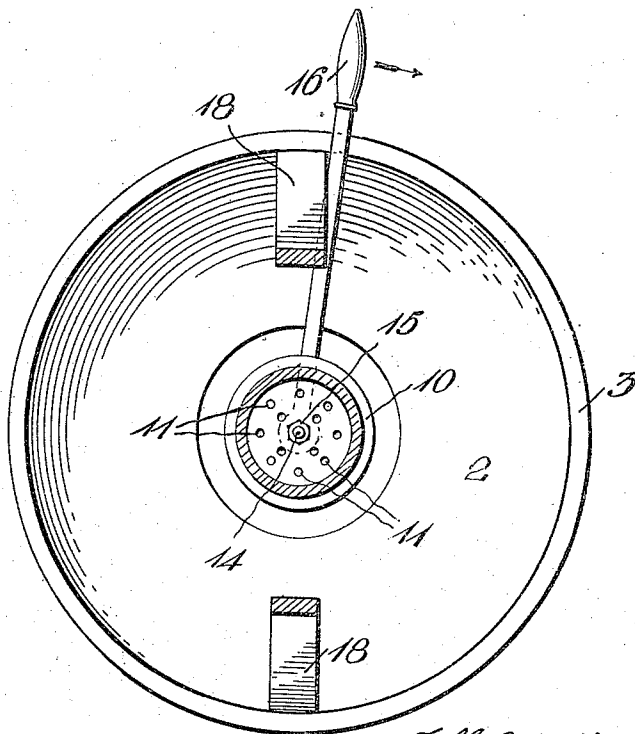


Fig. 4



Witnesses

J. P. Duffie

*T. H. Mintier,
H. J. Jennings,*

Inventors

John S. Duffie

Attorney

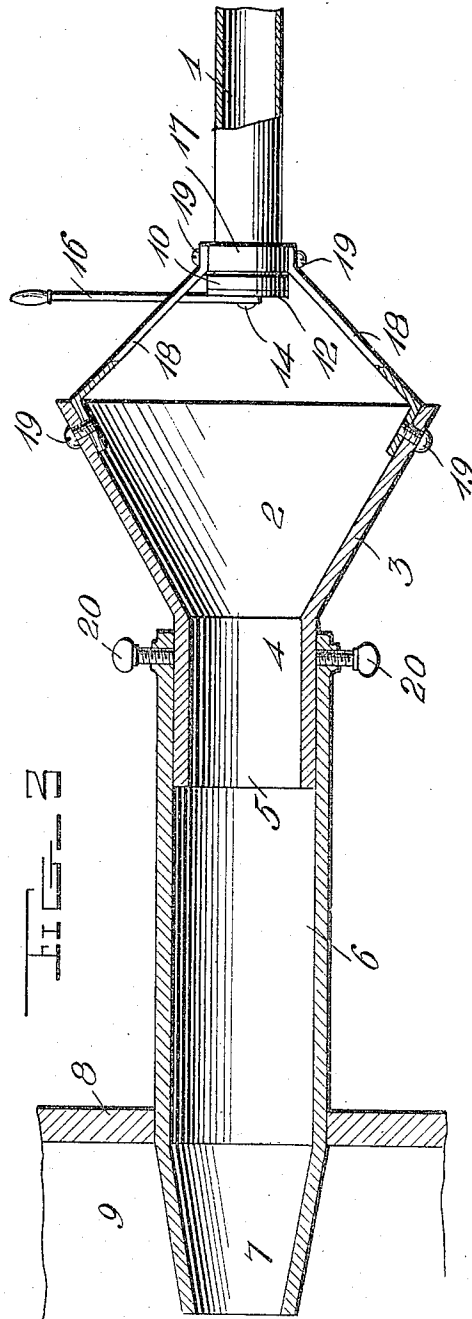
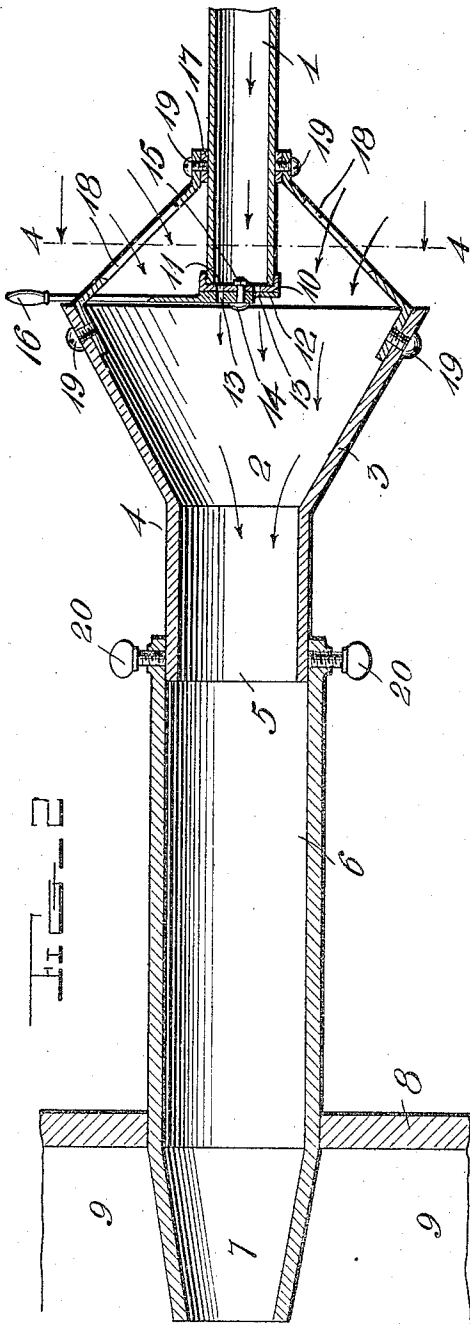
T. H. MINTIER & H. J. JENNINGS.
GAS BURNER.

APPLICATION FILED FEB. 25, 1909.

951,828.

Patented Mar. 15, 1910.

2 SHEETS—SHEET 2.



Witnesses
E. Allen
J. P. Duffie

Inventors:
T. H. Mintier
H. J. Jennings,
John Duffie
Attorney

UNITED STATES PATENT OFFICE.

THOMAS H. MINTIER AND HARRY J. JENNINGS, OF TEXARKANA, ARKANSAS,
ASSIGNORS TO HARRY R. SEGNAIR, OF TEXARKANA, TEXAS.

GAS-BURNER.

951,828.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed February 25, 1909. Serial No. 479,979.

To all whom it may concern:

Be it known that we, THOMAS H. MINTIER and HARRY J. JENNINGS, citizens of the United States, residing at Texarkana, in the county of Miller and State of Arkansas, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention relates to gaseous fuel feeders for furnaces of that type in which gas and air are mixed together and fed to a suitable point for burning.

The principal object of the invention is to provide an improved burner construction of this type which may be readily adjusted to obtain the proper mixture of gas and air.

A secondary object of the invention is to provide a feeder construction which will be simple and economical, efficient in operation and one in which the several component parts may be readily assembled or disassembled as occasion may necessitate.

With the foregoing and other objects in view the invention consists in the novel features of construction, combination and arrangement of parts illustrated in the accompanying drawings and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of a fuel feeder embodying our improvements. Fig. 2 is a central longitudinal section of Fig. 1. Fig. 3 is a similar view with the casing forming the mixing chamber in another position, and Fig. 4 is a vertical transverse section taken on the plane indicated by the dotted lines 4-4 of Fig. 2, looking in the direction indicated by the arrows.

In the accompanying drawings which are for illustrative purposes only and are therefore not drawn to scale, the numeral 1 indicates a feed pipe for feeding the gas to the mixing chamber 2. The mixing chamber is formed by the outwardly flared body 3 of an adjustable section or casing 4, provided at its inner end with a tubular longitudinal extension 5. Said extension 5 fits in the outer end of a discharge tube 6, the inner contracted end 7 of which extends through the wall 8 into the combustion chamber 9 of the steam boiler furnace. A cap 10, provided with a plurality of horizontal openings 11, is screwed on the discharge end of the feed tube 1. A cover plate 12, provided

with a plurality of apertures 13 to correspond with the apertures 11 of the cap 10, is rotatably mounted on the outer face of the latter by a pivot bolt 14, extending centrally through the cover plate and cap, and held in position by a nut 15. The cover plate is provided with a laterally disposed operating handle 16, by means of which it may be turned to bring the openings thereof, into or out of registration with the openings 11 of the cap and thus regulate the discharge of the gas into the mixing chamber 2. When the gas passes into the mixing chamber it comes in contact with the inner wall of the body 3, which forms the same and air is drawn or sucked thereby into the mixing chamber in which it is combined with the gas to form the fuel which subsequently passes through the discharge tube 6 into the combustion chamber 9 of the furnace. The outer end of the casing 4 is slidably supported upon the feed tube, by means of a ring or band 17 which encircles said tube and is connected with the body 3 of the casing by obliquely disposed brace bars 18, connected at opposite ends with the ring and body by screws 19, or other equivalent means.

To increase the quantity of air, combined with a certain quantity of gas, the casing 4 is moved inwardly by means of the band 17, the extreme inward position of said casing being indicated in Fig. 3, in which position the greatest quantity of air is drawn into the mixing chamber to be combined with the gas. The casing 4 is held at the proper adjustment by retention screws 20 screwing through the outer end of the discharge tube 6 against the tubular extension 5 of said casing.

It is to be understood of course that while we have illustrated our fuel feeder in connection with a steam boiler furnace, it may be used in any connection where it is desirable to feed a gaseous fuel to a suitable point for burning.

From the foregoing description, taken in connection with the drawings, it is thought that the construction and operation of our invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and minor details of construction may be resorted to without departing from the prin-

ciple or sacrificing any of the advantages of the invention as defined in the appended claims.

5 Having described our invention, what we claim as new and desire to secure by Letters Patent, is:

10 1. In a device of the class described, a feed tube for the gas, a longitudinally adjustable casing having an outwardly flared body forming a mixing chamber for the air and gas, and a longitudinal extension, a discharge tube to receive the extension of the casing, means for slidably supporting the body of the casing upon the feed tube, means
15 for holding the casing at the desired adjustment and means arranged at the discharge end of the feed tube for regulating the admission of the gases into the mixing chamber.

20 2. In a fuel burner of the class described, a feed tube for the gas, a tubular longitudinally adjustable casing forming a mixing chamber, communicating with the feed tube, means for slidably supporting the outer end
25 of said casing upon the feed tube, a cap pro-

vided with a plurality of horizontal openings closing the discharge end of the feed tube and a cover plate provided with a series of openings to correspond with those of the cap and with a laterally disposed operating lever, rotatably mounted upon said cap. 30

3. In a device of the class described, a feed tube for the gas, a casing providing a mixing chamber communicating with the discharge end of the feed tube, a discharge
35 tube connected with and leading from said casing and means for slidably mounting or supporting the outer end of said casing upon said feed tube, said means comprising a band encircling the feed tube and a pair of
40 obliquely disposed brace bars connected at opposite ends with said band and the outer end of said casing, respectively.

In testimony whereof we affix our signatures, in presence of two witnesses.

THOMAS H. MINTIER.
HARRY J. JENNINGS.

Witnesses:

A. B. LITTLE,
CHAS. W. JENNINGS.