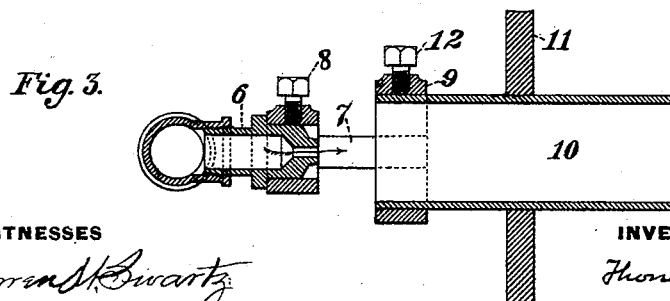
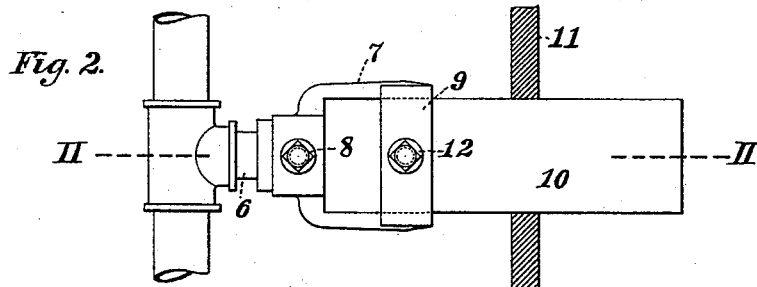
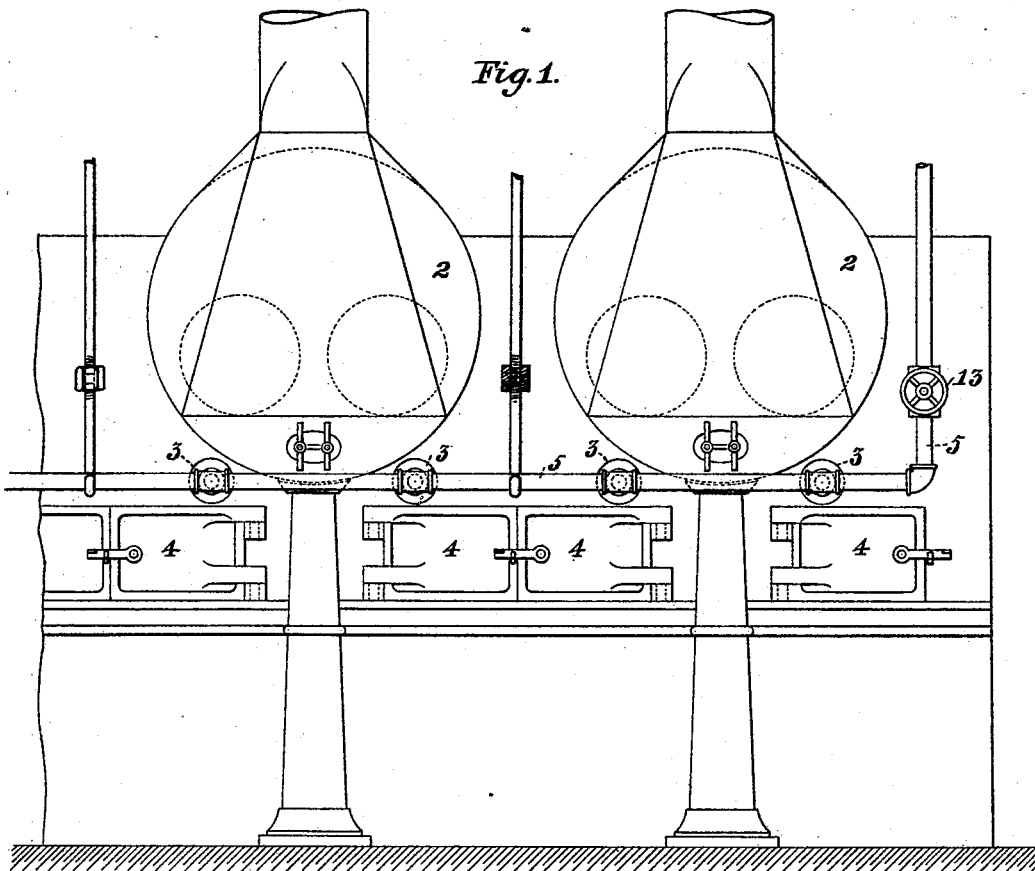


(No Model.)

T. GUNNING.
SMOKE CONSUMER.

No. 489,381.

Patented Jan. 3, 1893.



WITNESSES

Harriet M. Swartz
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UNITED STATES PATENT OFFICE.

THOMAS GUNNING, OF PITTSBURG, PENNSYLVANIA.

SMOKE-CONSUMER.

SPECIFICATION forming part of Letters Patent No. 489,381, dated January 3, 1893.

Application filed March 12, 1892. Serial No. 424,665. (No model.)

To all whom it may concern:

Be it known that I, THOMAS GUNNING, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Smoke-Consumers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of a battery of boilers provided with my improved smoke-consumer. Fig. 2 is an enlarged top plan view of the consumer. Fig. 3 is a vertical sectional view of the same.

My invention relates to that class of devices by which air is forced in above the grate of a boiler furnace to combine with and consume the smoke arising from the burning fuel; and it consists in a yoke supported in front of the air pipe, into an aperture of which yoke passes an adjustable injector arranged to drive a jet of steam into the air pipe and thereby draw a current of air therethrough.

In the drawings, 2, 2, represent the boilers having the front casing pierced with a series of holes 3, 3, located above the firing doors 4.

In front of these holes passes the steam main 5, having suitable T-connections in front of each hole, into which connections screw the injectors 6, which at their outer ends carry the yokes 7, the injectors entering holes in the outer ends of the yokes and being held therein by set-screws 8. The arms of the yoke carry at their inner ends the collar or band 9, which encircles the air-pipe 10, passing through the casing 11, and held in the collar by a set-screw 12. A valve 13 in the steam main controls the steam passing to each injector, and this main is supported in any suitable manner in front of the boilers.

It is evident that by turning the injector in the T-connection and adjusting the injector and the air pipe in the yoke by the set-screws,

the distance of the injector from the mouth of the air pipe and their relative distances from the casing, may be accurately regulated.

The advantages of my construction are obvious. When the device is applied to a furnace, the parts may be moved until the exact point is found wherein the greatest efficiency is attained, when they are held in such position by the set-screw.

Many changes may be made in the form and arrangement of the parts of my invention without departure therefrom, since

What I claim is:—

1. The combination with a boiler-casing, having horizontally adjustable air-supply pipes passing therethrough, of a steam pipe passing in front of the boilers and having injectors leading therefrom, said injectors carrying yokes which are supported thereon and encircle the air-pipes; substantially as and for the purposes described.

2. The combination with a boiler-casing, having a horizontally adjustable air-supply pipe passing therethrough, of a steam-pipe having an injector projecting therefrom, a yoke supported upon the injector, said yoke carrying a collar having a set-screw engaging the air-pipe and holding it therein; substantially as and for the purposes described.

3. The combination with a boiler-casing, having a horizontally adjustable air-supply pipe passing therethrough, of a steam-pipe having a T-connection, an injector screwed into such connection and supporting at its outer end a yoke, and a ring upon the yoke which encircles the air-pipes; substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 7th day of March, A. D. 1892.

THOMAS GUNNING.

Witnesses:

W. B. CORWIN,
C. BYRNES.