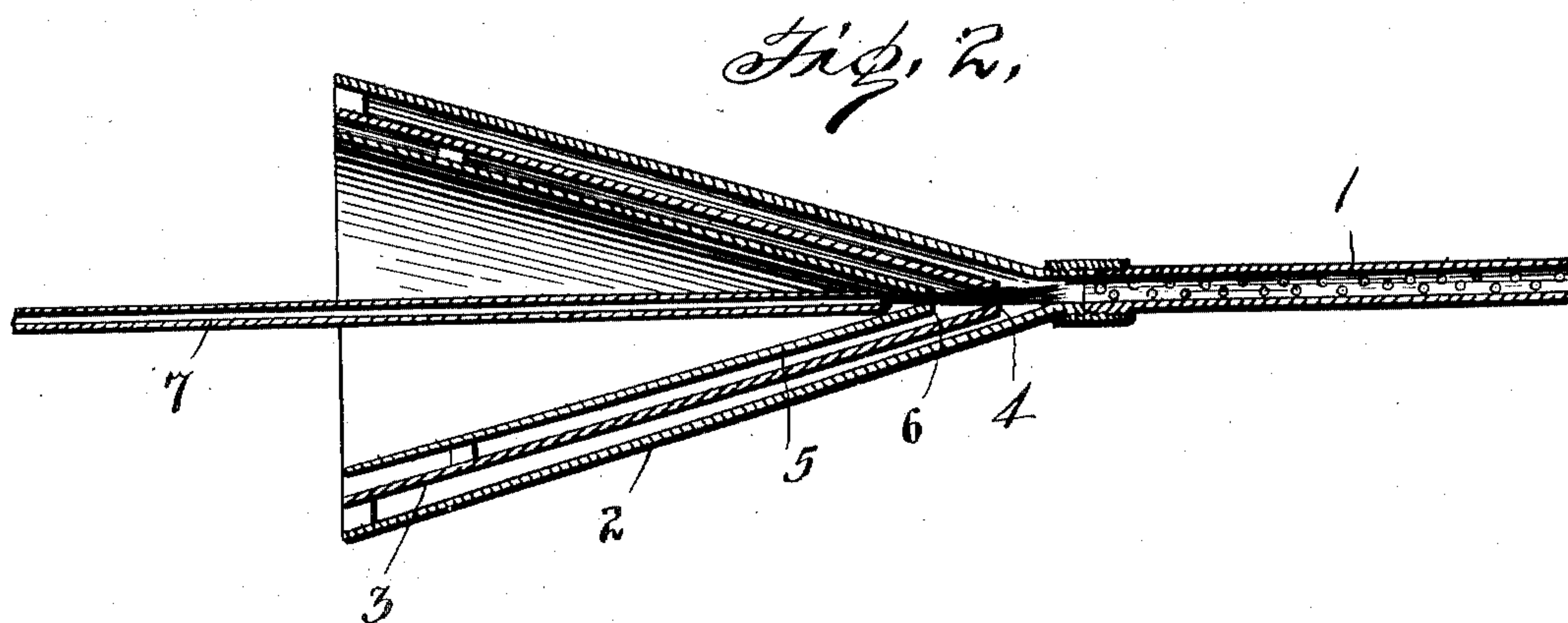
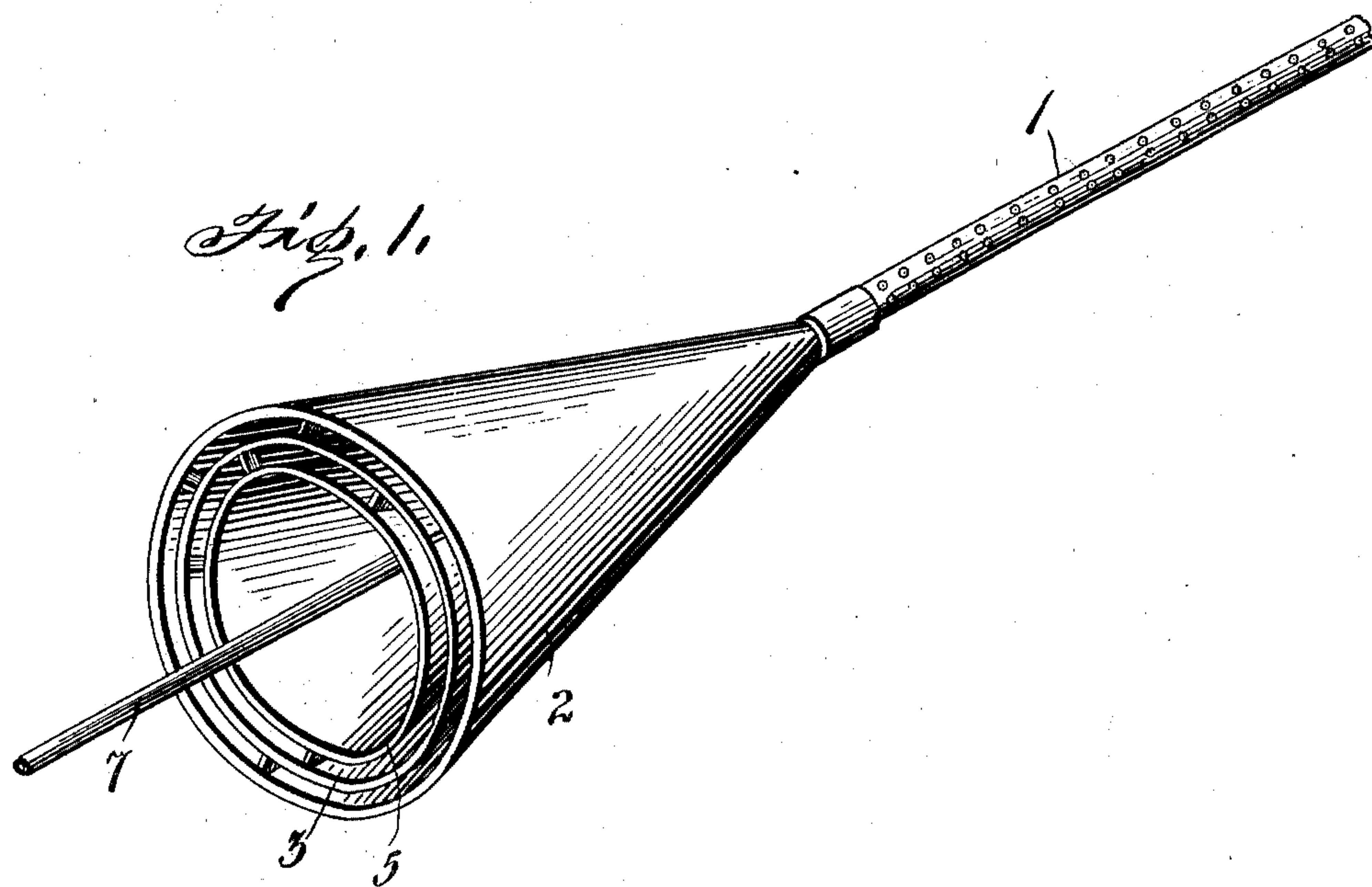


No. 760,230.

PATENTED MAY 17, 1904.

J. F. MILES.
DRAFT PRODUCING DEVICE.
APPLICATION FILED JUNE 25, 1903.

NO MODEL.



Witnesses

for A. Koehl.

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UNITED STATES PATENT OFFICE.

JOSEPH FURNAS MILES, OF PARIS, TEXAS, ASSIGNOR TO J. H. MILES, OF LUDLOW, OHIO.

DRAFT-PRODUCING DEVICE.

SPECIFICATION forming part of Letters Patent No. 760,230, dated May 17, 1904.

Application filed June 25, 1903. Serial No. 163,033. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH FURNAS MILES, a citizen of the United States, residing at Paris, in the county of Lamar and State of Texas, have
5 invented certain new and useful Improvements in Draft-Producing Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains
10 to make and use the same.

My invention is an improved draft-producing device adapted for use under the eye of a kiln or under a boiler or other furnace, or as a twyer for a blacksmith's forge; and it consists
15 in the construction and arrangement of devices hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a draft-producing device embodying my improvements. Fig. 2 is a detail
20 sectional view of the same.

In the embodiment of my invention I provide a pipe 1, which is here shown as perforated. The same may have its inner end turned up and fashioned in the shape of a disk when the
25 device is to be used in a forge. To the outer end of the pipe is coupled an outer funnel 2, which serves as an air-intake for the said pipe 1. Within the outer funnel is an intermediate funnel 3, which is of substantially the same
30 shape as the outer funnel and is appropriately spaced therefrom and has an opening 4 at its inner end, which is opposite the intake end of the pipe 1. Within the intermediate funnel is an inner funnel 5, which is correspondingly
35 shaped and is appropriately spaced therefrom and is provided with an opening 6 at its inner end opposite the opening 4 of the funnel 3. A steam-blast pipe 7 has its discharge end disposed centrally in the inner funnel in
40 position to discharge directly into the intake of the pipe 1 through the openings 4 6 of the funnels 3 5.

In practice the pipe 1 may lead into a kiln or into a furnace under a boiler or may be
45 buried or partly buried in the fuel of a forge. The steam-blast from the pipe 7 passes through the pipe 1 into the kiln, the fire-box of the fur-

nace, or into and through the mass of fuel in the forge, as the case may be, and the steam-blast also serves to draw air through the fun-
50 nels 2 3 5 into the pipe 1 to cause the same to become thoroughly commingled with the steam, so that the latter is finely divided and blown into the fire in the kiln, furnace, or
55 forge to actively promote combustion therein. It will be understood that an initial commingling of the air with the steam as it issues from the steam-discharge or blast-pipe 7 is effected at the inner portion of the inner cone
60 or funnel 5, that air drawn in through the cone or funnel 3 is also commingled with the steam in the inner end of the said cone 3, and that a further commingling of the air and
65 steam is effected in the inner end of the cone or funnel 2, where it communicates with the intake of the pipe 1. In other words, the air-intake funnels discharge air into the steam-
blast at different points to progressively increase the proportion of air mingled with the
70 steam, thus rendering the device exceedingly efficient in promoting combustion within the kiln, furnace, or forge.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the inven-
75 tion will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be
80 resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

A steam and air blast device comprising an outer funnel having a perforated discharge-
pipe at and extending from its smaller end, an intermediate funnel, in and supported by
90 the outer funnel, spaced therefrom and having its smaller end opposite and spaced from the smaller end of the outer funnel, an inner funnel, in and supported by the intermediate
funnel, spaced therefrom and having its

smaller end opposite and spaced from the
smaller end of the intermediate funnel, and a
steam-blast pipe discharging through the
smaller ends of the funnels and into the per-
5 forated discharge-pipe, substantially as de-
scribed.

In testimony whereof I have hereunto set

my hand in presence of two subscribing wit-
nesses.

JOSEPH FURNAS MILES.

Witnesses:

S. H. HANCOCK,
F. D. MALLORY.