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SMOKE WASHER.
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965,954.

Patented Aug. 2, 1910.

FIG. I

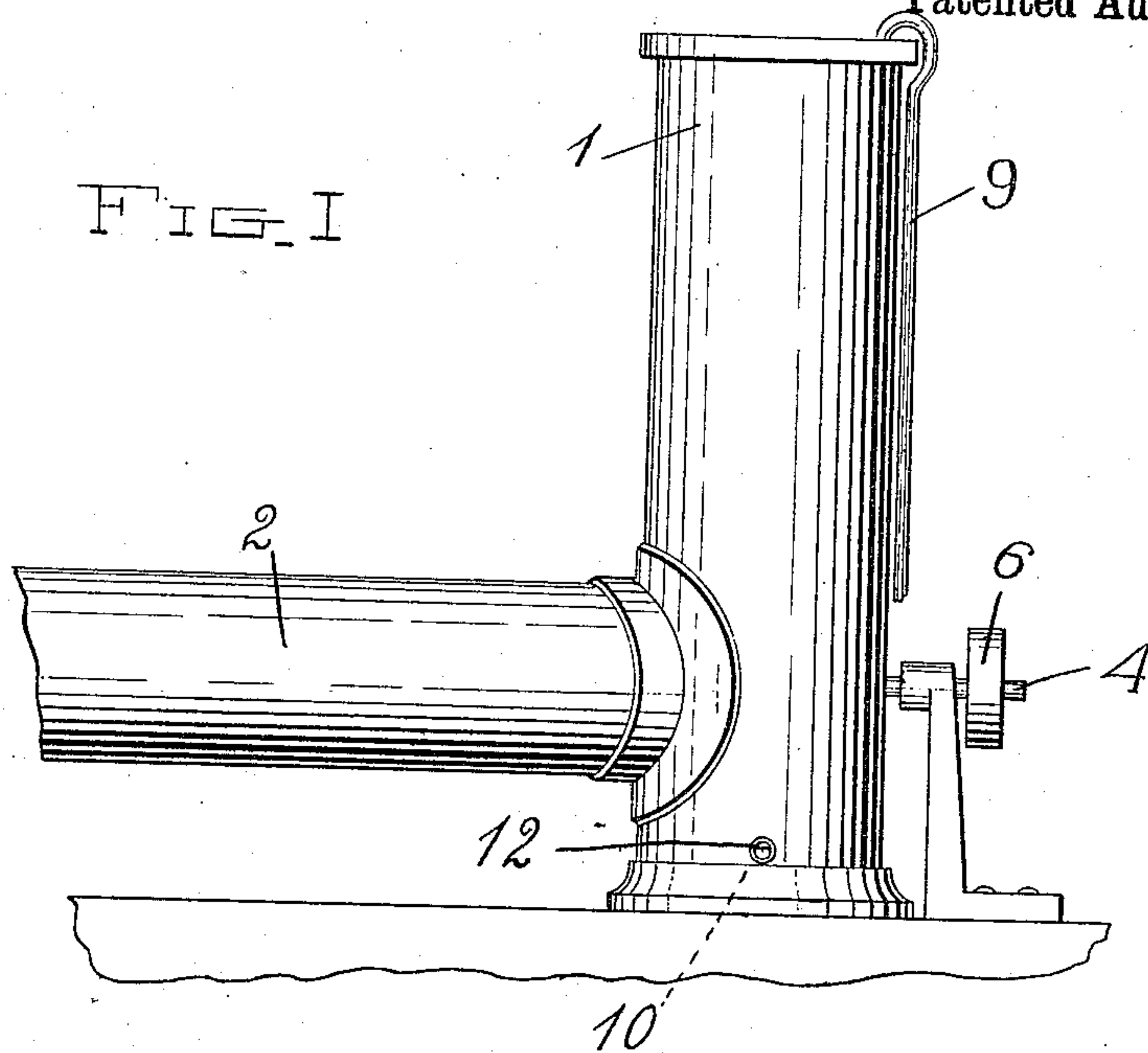
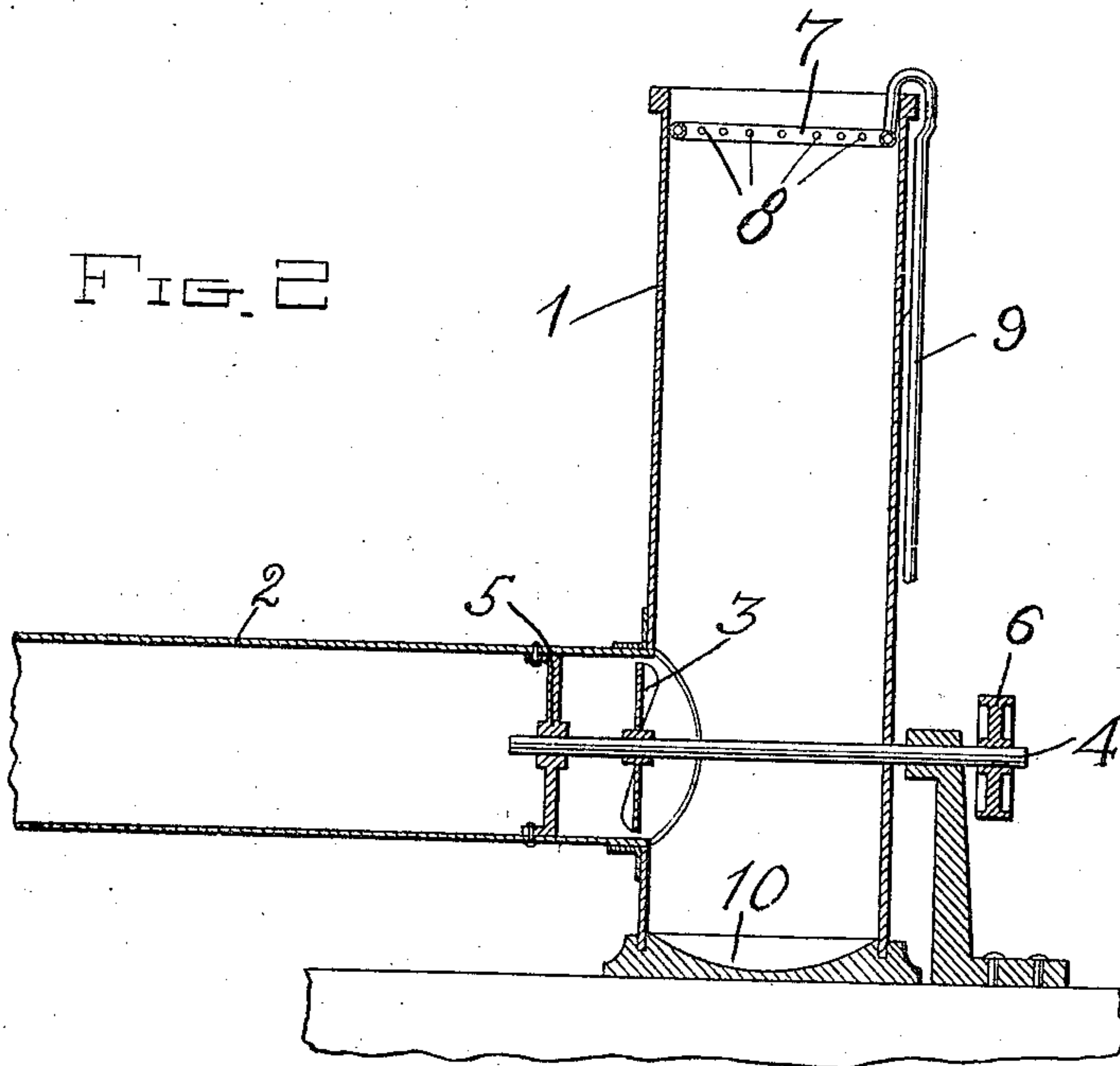


FIG. 2



Witnesses

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UNITED STATES PATENT OFFICE.

HERMAN SCHROEDER, OF BUTTE, AND GEORGE KESSLER, OF DURANT, MONTANA; MAY
SCHROEDER ADMINISTRATRIX OF SAID HERMAN SCHROEDER, DECEASED.

SMOKE-WASHER.

965,954.

Specification of Letters Patent.

Patented Aug. 2, 1910.

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To all whom it may concern:

Be it known that we, HERMAN SCHROEDER, a citizen of the United States, residing at Butte, county of Silverbow, Montana, and
5 GEORGE KESSLER, a citizen of the United States, residing at Durant, in the county of Silverbow and State of Montana, have invented certain new and useful Improvements in Smoke-Washers; and we do declare
10 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 to make and use the same.

This invention relates to improvements in
15 smoke washers.

The object of the invention is to provide a device of this character adapted to be connected to the flue of a smelter, furnace, or the like, to conduct the smoke therefrom to
20 a stack, in which is arranged means for separating the arsenic, sulfur, and other matter from the smoke, and conducting said matter to suitable settling tanks.

With the foregoing and other objects in
25 view, the invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings Figure 1 is a side view of a smoke consumer constructed in accordance with the invention; and
30 Fig. 2 is a vertical sectional view of the same.

Referring more particularly to the drawings, 1, denotes a smoke stack which is connected adjacent to its lower end to a smoke
35 conducting tube, 2, the opposite end of the tube, 2, being adapted to be connected to the flue of a smelter, furnace, or like, (not shown). Revolvably mounted in the conducting tube, 2, adjacent to its connection
40 with the smoke stack, 1, is a fan, 3, the shaft, 4, of which is journaled in suitable bearings, 5, and projects through the opposite side of the stack, 1, said projecting end having
45 mounted thereon a drive pulley, 6, which is adapted to be connected by a belt with any suitable operating mechanism.

Arranged in the stack, 1, near the upper end thereof, is an annular water-discharging or spraying pipe, 7, said pipe being of
50 such size as to fit closely within the wall of the stack, and being provided on its inner side with a series of water-discharging aper-

tures, 8. The annular spray pipe, 7, is connected to a water supply pipe, 9, which is
55 here shown as extending down the outer side of the stack. The pipe, 9, is connected to a suitable water supply, by means of which a stream of water is conducted to the spray-
60 pipe, 7, in the stack and discharged therefrom onto the smoke passing through the stack, thus removing from the smoke all the impurities contained therein, as well as the
65 arsenic, sulfur, and other such chemical matter.

Arranged in the lower end of the stack is a tank, or basin, 10, which is adapted to catch the water and the impurities and other matter removed thereby from the smoke, and to conduct the same through suitable
70 discharge pipes, 12, with which said basin or tank is supplied, and to conduct said water and other matter to suitable settling tanks (not shown).

The arrangement of the fan, 3, in the
75 smoke conducting tube, 2, will create a draft and prevent the smoke from being clogged or stopped in the stack, 1, by the water sprayed thereon from the spray pipe, 7.

From the foregoing description, taken in
80 connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring more extended explanation.

Having thus fully described our inven-
85 tion, what we claim as new, and desire to secure by Letters-Patent, is:

A smoke washer comprising a vertical stack, a smoke conducting tube horizontally connected to said stack, a bearing mounted
90 in said tube, a bearing opposite the bearing of the tube and arranged externally of the stack, a fan-shaft journaled in said bearings, a fan secured thereto and located within the smoke conducting tube, a receptacle at the
95 end of the stack upon which the stack is supported, and a spraying device arranged in and adjacent the top of the stack.

In testimony whereof we have hereunto set our hands in presence of two subscrib-
100 ing witnesses.

HERMAN SCHROEDER.
GEORGE KESSLER.

Witnesses:

GUSTAV NICKEL,
WARRINGTON RICHARDS.