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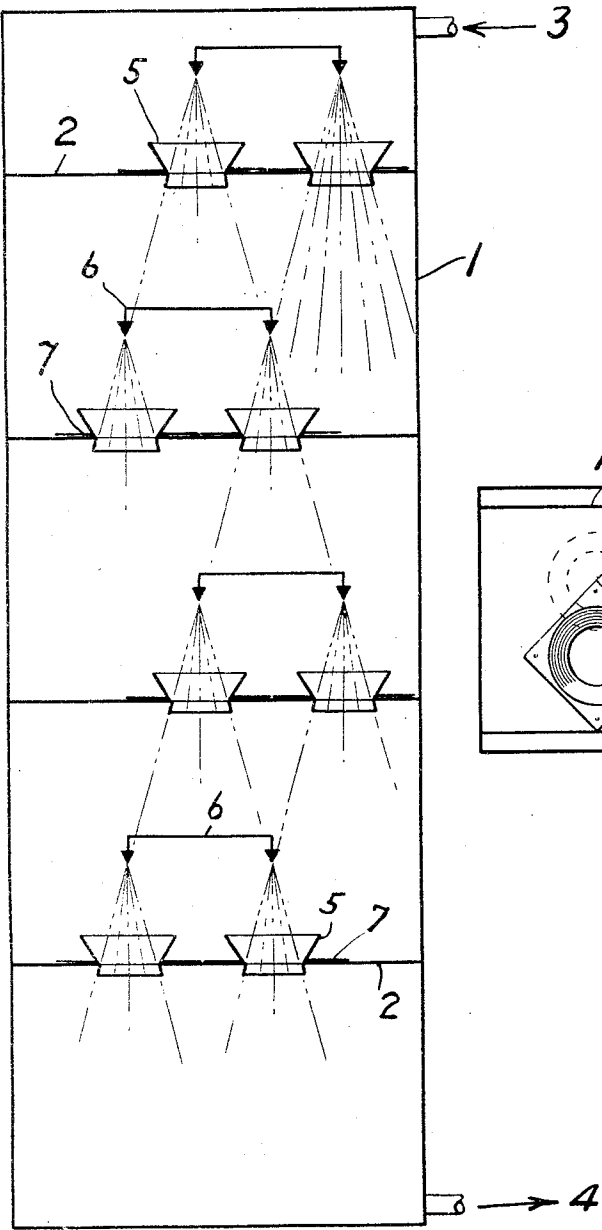


FIG. 1.

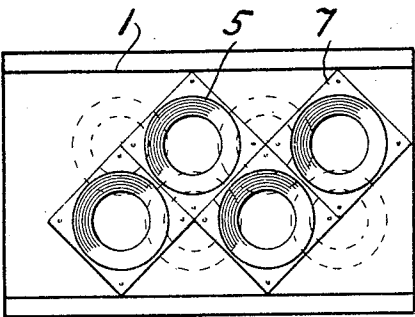


FIG. 2.

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1 Claim. (Cl. 261—116)

Objects of the present invention are to provide for efficiently and thoroughly scrubbing air and gas containing dust particles, obnoxious fumes and absorbable vapors; to avoid the development
5 of resistance when gases are passed through the scrubber; and, in fact, under certain conditions, to actually create a slight draft; to avoid by-passing the gas in respect to the spray from the nozzles and to compel the gas to pass through ad-
10 jutages, or specially constructed throat pieces, which are completely filled with spray issuing from jet nozzles; and to scrub the gas by the impact action of spray from the spray nozzles.

Other objects of the invention will appear from the following description at the end of which
15 the invention will be claimed.

Generally stated, the invention consists in an upright casing having horizontal imperforate partitions subdividing it into superposed com-
20 partments and having an inlet at its upper part and an outlet at its lower part, adjutages extending through and above and below the partitions, and spray nozzles directed towards the adjutages and adapted to fill the same with spray.

The invention also comprises the improvements to be presently described and finally claimed.

In the following description reference will be made to the accompanying drawing forming part hereof and in which

30 Figure 1 is a vertical sectional view showing diagrammatically a scrubber embodying features of the invention, and

Fig. 2 is a similar transverse sectional plan view.

35 In the drawing, 1 is an upright casing or tower. 2 indicates horizontal imperforate partitions subdividing the casing into superposed compartments or spaces. 3 is an inlet at the upper part of the casing 1, and 4 is an outlet at the lower part of the casing 1. 5 indicates adjutages inserted into
40 the partitions and extending through and above and below the partitions. The cross section of an adjutage is generally circular and longitudinally the cross section approaches two frustums of cones with their smaller bases in contact. An
45 adjutage is sometimes referred to as a Venturi tube or nozzle and an adjutage and a Venturi tube operate in much the same way. 6 indicates liquid spray nozzles directed towards the adjutages and
50 adapted to fill the same with spray. 7 represents holders shown as rectangular fish plates and they are a means for mounting the adjutages through the partitions. The throats of the adjutages are shown as aligned with the partitions, and the in-
55 lets of the adjutages are shown as extending fur-

ther above the partitions than the outlets of the adjutages extend below the partitions. The adjutages are shown as arranged in staggered relation at the different partitions.

The mode of operation may be described as follows:

The air or gas to be scrubbed passes down through the scrubber, and the adjutages and sprays operate in such a way that no resistance is developed, and in fact under certain conditions
65 of operation, a slight draft is created. No gas can by-pass the range of the sprays, because the imperforate portions of the partitions block it. The gas or air can therefore only pass through the
70 adjutages which are completely filled with spray issuing from the jet nozzles 6, and the impact action of the spray efficiently scrubs the gas or air.

It will be obvious to those skilled in the art to which the invention relates that modifications may be made in details of construction and ar-
75 rangement and matters of mere form without departing from the spirit of the invention which is not limited to such matters or otherwise than the prior art and the appended claim may require.

I claim:

80 A scrubber comprising, in combination, an upright casing having horizontal perforate partitions constituting the sole means for subdividing it into superposed compartments and having an inlet at its upper part and an outlet at its lower
85 part, each of said partitions having adjutages extending through and above and below it, the throats of the adjutages being aligned with the partitions and the inlets of the adjutages extend-
90 ing further above the partitions than the outlets of the adjutages extend below the partitions, and liquid spray nozzles directed towards the adjutages and adapted to fill the same with spray, said adjutages being arranged in staggered rela-
95 tion at the different partitions and sufficiently spaced to spread the spray across the compart-

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