

No. 690,455.

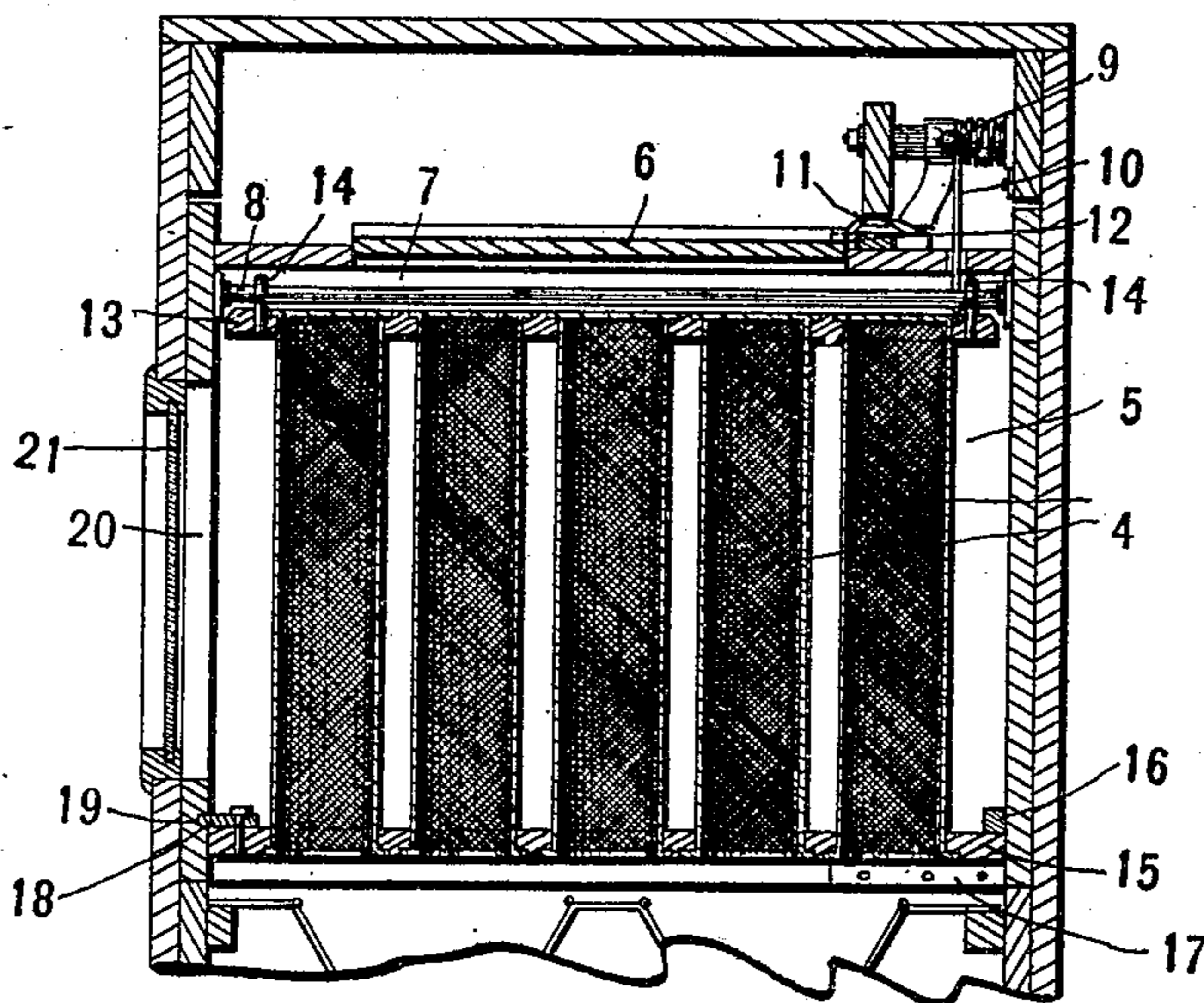
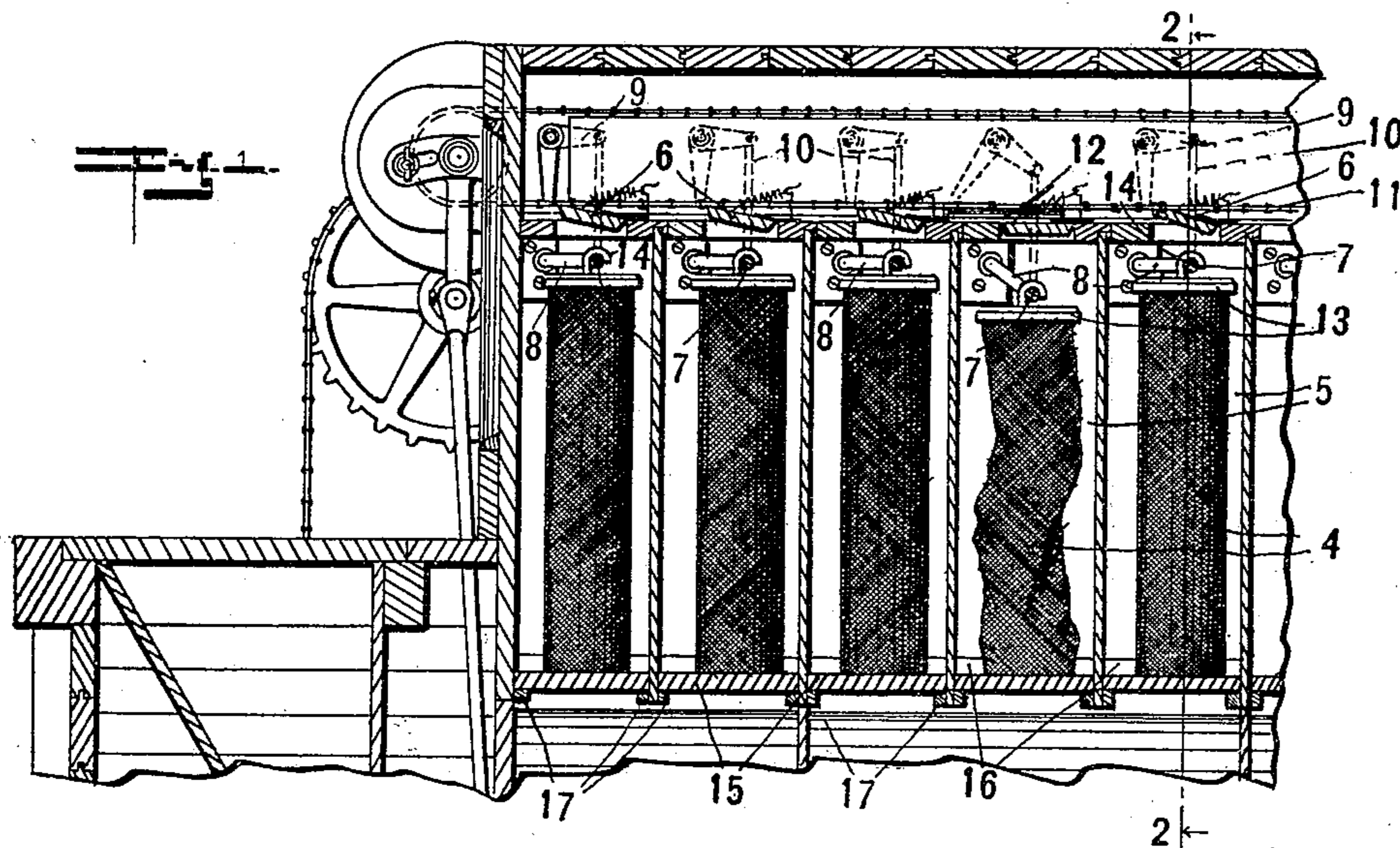
Patented Jan. 7, 1902.

O. E. McMEANS.
SUPPORT FOR DUST COLLECTOR TUBES.

(Application filed May 13, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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Bertha M. Ballard

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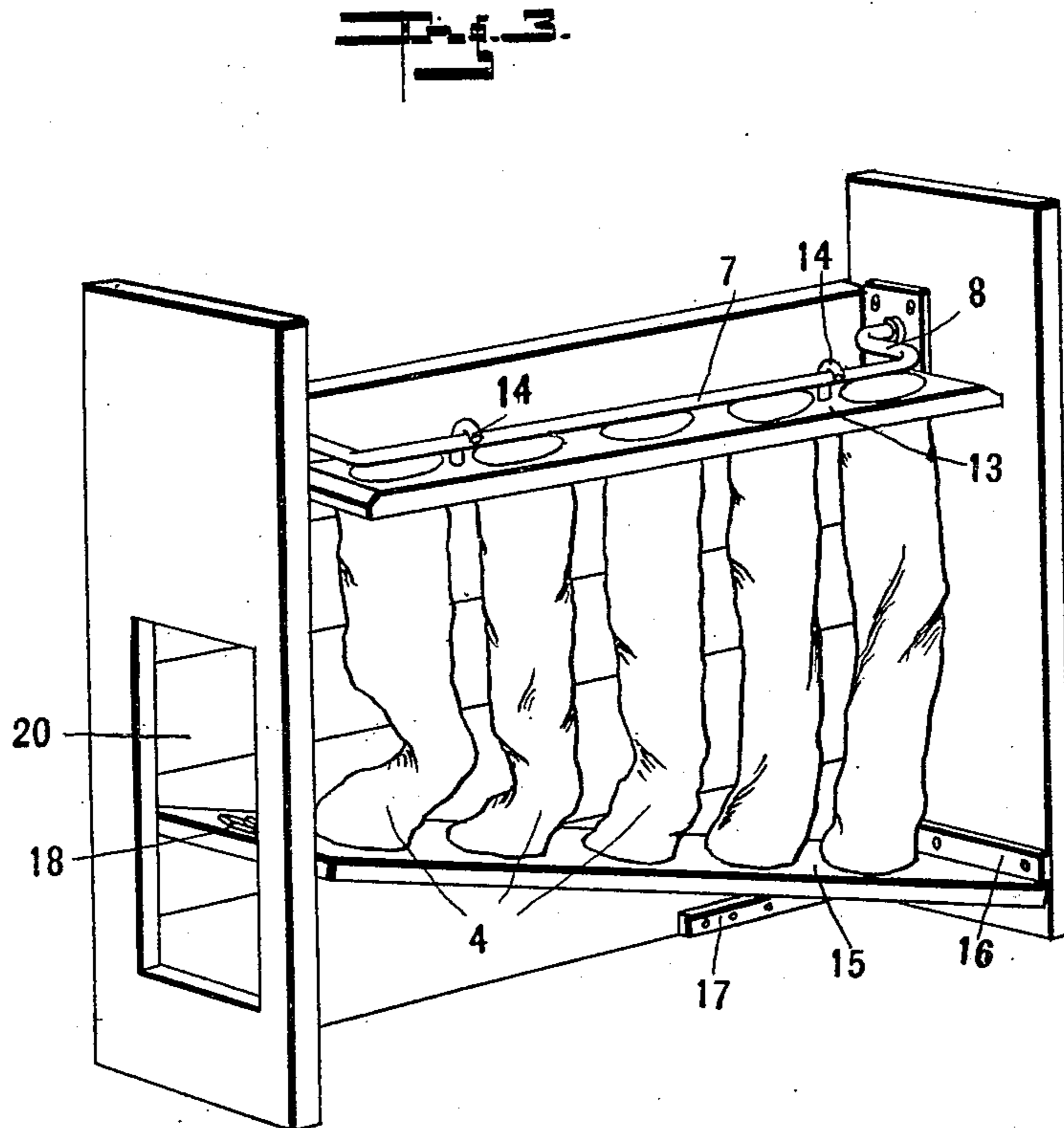
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UNITED STATES PATENT OFFICE.

ORANGE E. McMEANS, OF RICHMOND, INDIANA, ASSIGNOR TO RICHMOND CITY MILL WORKS, OF RICHMOND, INDIANA, A CORPORATION OF INDIANA.

SUPPORT FOR DUST-COLLECTOR TUBES.

SPECIFICATION forming part of Letters Patent No. 690,455, dated January 7, 1902.

Application filed May 13, 1901. Serial No. 59,999. (No model.)

To all whom it may concern:

Be it known that I, ORANGE E. McMEANS, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented a new and useful Support for Dust-Collector Tubes, of which the following is a specification.

My invention relates to an improved detachable support for the cloth or other collector-tubes used in dust-collectors.

The object of my invention is to provide a support for dust-collector tubes of such character that the tubes may be easily and quickly inserted and withdrawn from the machine without stopping the operation of said machine, whereby the tubes may be cleaned, repaired, or replaced.

The accompanying drawings illustrate my invention as applied to a dust-collector of the general construction shown in Patent No. 641,681, issued January 23, 1900, to E. R. Draver.

Figure 1 is a longitudinal section. Fig. 2 is a transverse section on line 2 2 of Fig. 1. Fig. 3 is a detached perspective detail.

Heretofore collector-tubes have been so mounted in the machine that in order to remove said tubes for cleaning, repair, and renewal it has been necessary to stop the operation of the machine.

In my present construction the collector-tubes 4 are mounted in groups in cells 5, the top of each of which is provided with a trap-door 6. In the patent heretofore mentioned each group of tubes is attached at its upper end upon a transverse rod similar to my rod 7, the attachment being such as to be difficult to separate. Each rod 7 is provided with an arm 8 at each of its ends, the said arms being pivotally supported in the frame of a cell at their free ends. Mounted above each rod 7 is a bell-crank lever 9, one arm of which is connected by a link 10 to the adjacent rod 7, the arrangement being such that an oscillation of the bell-crank lever will cause an oscillation of the rod, said oscillation being accomplished by means of an endless belt 11, carrying a block 12, which serves to automatically close the trap-doors 6 in succession and to correspondingly oscillate levers 9 in succession.

In my present construction the upper ends of all of the tubes 4 of each group are secured to a transverse bar 13, provided upon its upper face with one or more hooks 14, which may be hooked over the rod 7. The lower ends of the tubes 4 are secured to a second transverse bar 15. Mounted in each cell 5, at one end thereof, is a projecting tongue 16, beneath which one end of the bar 15 may be placed. Mounted below tongue 16 is a second tongue 17 a distance from tongue 16 equal to the thickness of bar 15. Tongue 17 may project from the same face of the cell as tongue 16; but it is preferable that said tongue project from that wall of cell 5 at right angles to tongue 16 in order to form a better support for bar 15. Pivoted to that end of bar 15 opposite tongues 16 and 17 is a button 18, adapted to enter a recess 19, formed in the adjacent end of the cell. One wall of the cell is provided with an opening 20 of a size sufficient to allow the withdrawal of the bars 13 and 15 and the parts secured thereto.

In operation each group of collector-tubes normally consists of the two cross-bars 13 and 15 and the tubes secured to and extending between said bars. In order to remove a group of tubes from the machine, the operator opens a door 21, leading to the opening 20, and by turning button 18 out of recess 19 the button end of the bar 15 may be swung upward and the bar withdrawn from between tongues 16 and 17. The hooks of bar 13 may be then lifted off of the cross-rod 7, so that the withdrawal or insertion of a group of tubes may be accomplished during the operation of the machine and without in any manner disturbing the operation of the remaining groups.

I claim as my invention—

1. In a dust-collector, the combination with an inclosing casing, of one or more collector-tubes, a bar secured to one end of said tubes, a tongue carried by the casing in position to receive one end of said bar therebeneath, a second tongue arranged in said casing so as to project beneath said bar, a catch carried by the other end of said bar and adapted to coact with the casing, a second bar secured to the opposite ends of said tubes, and means carried by the second bar for detachably suspending the same to vibrating means.

2. In a dust-collector, the combination with
an inclosing casing, of one or more collector-
tubes, a bar secured to one end of said tubes,
a tongue carried by the casing in position to
5 receive one end of said bar therebeneath, a
catch carried by the other end of said bar
and adapted to coact with the casing, a sec-
ond bar secured to the opposite ends of said
tubes, hooks carried by said second bar, and
10 means mounted in the casing for receiving
said hooks.

3. In a dust-collector, the combination with
an inclosing casing, of a reciprocating rod
mounted therein, one or more collector-tubes,

a bar secured to the upper ends of said tubes 15
means for detachably securing said bar to
the reciprocating rod, a second bar secured
to the lower ends of said tubes, and means
carried by the casing and opposite ends of
the said second bar for detachably holding 20
said bar in the casing, whereby any set of
tubes may be removed without disturbing
any other set.

ORANGE E. McMEANS.

Witnesses:

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