(No Model.)

M. R. RUBLE.

INDUCTION APPARATUS.

No. 509,400. Patented Nov. 28, 1893.

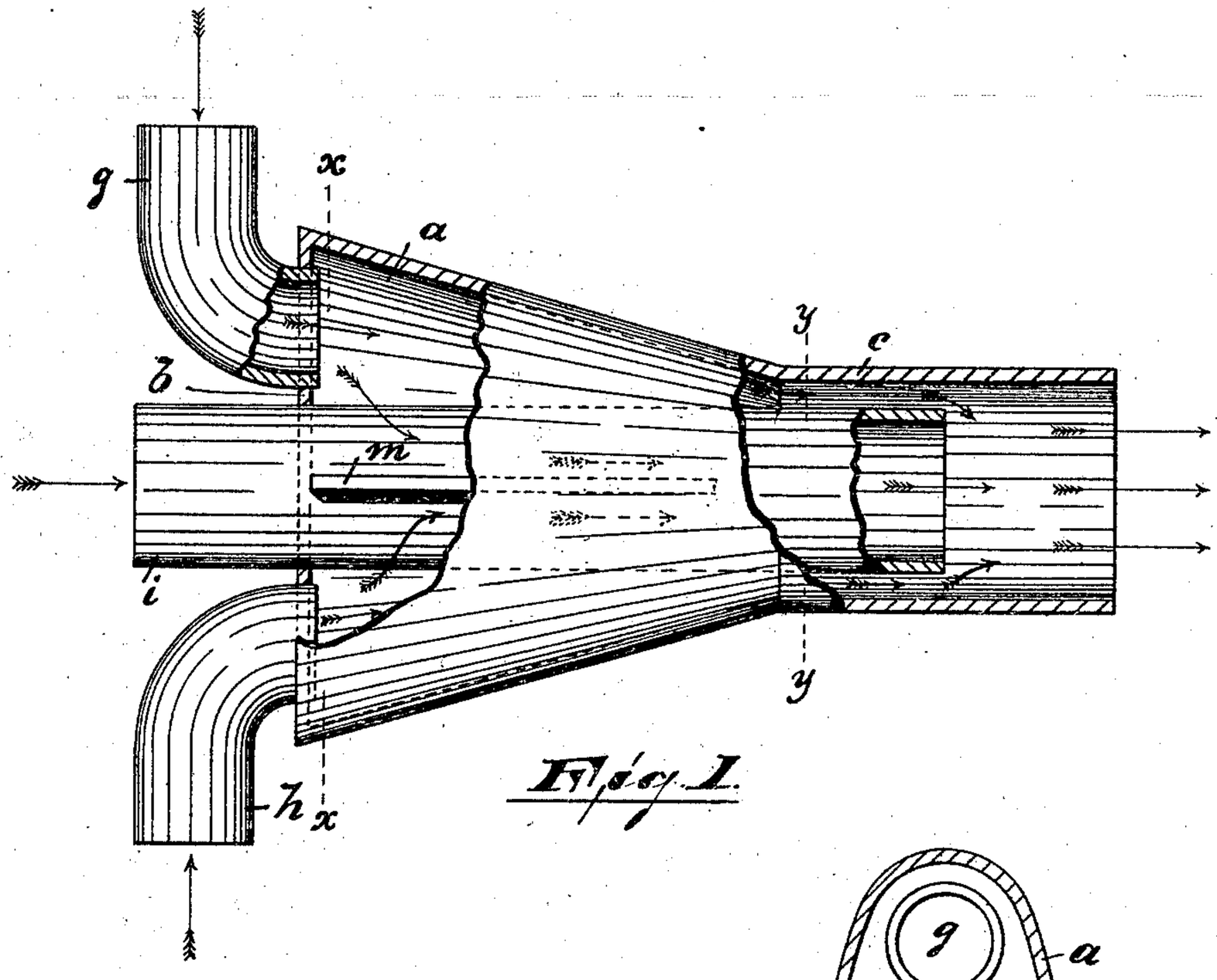

Fig. 1.

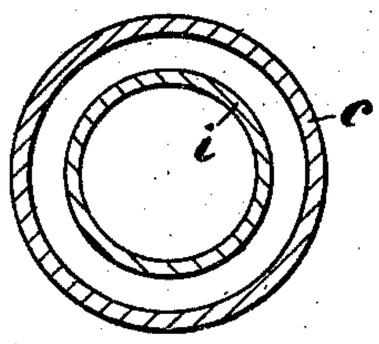

Fig. 3.

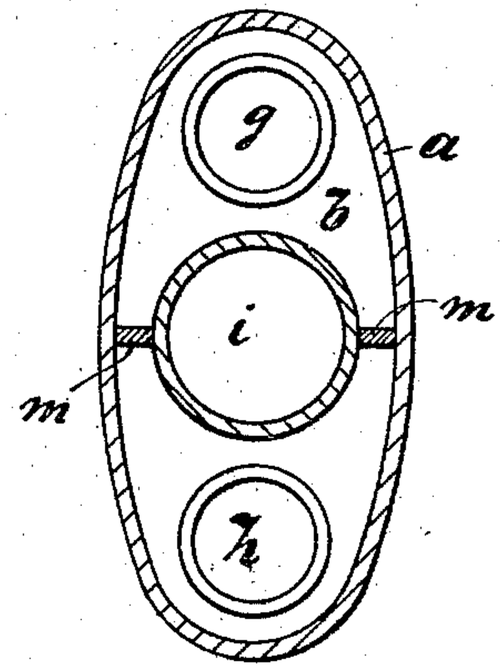

Fig. 2.

WITNESSES:
Wm. D. Bell.
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UNITED STATES PATENT OFFICE.

MARTIN ROSE RUBLE, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE RUBLE AMERICAN BLOWER AND INJECTOR COMPANY, OF SAME PLACE.

INDUCTION APPARATUS.

SPECIFICATION forming part of Letters Patent No. 509,400, dated November 28, 1893.

Application filed November 23, 1892. Serial No. 452,923. (No model.)

To all whom it may concern:

Be it known that I, MARTIN ROSE RUBLE, a citizen of the United States, residing at Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Induction Apparatus; and I do hereby 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 to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is the construction of a new and useful induction apparatus, whereby air, gases, shavings, dust or similar matters may be sucked up and discharged by means of the passage of a current of air.

In the drawings, similar letters indicate similar parts throughout the different views.

Figure 1. is a side view of the improved induction apparatus, with certain portions broken away. Fig. 2. is a cross section on the line *x*—*x* of Fig. 1. and Fig. 3, a cross section on the line *y*—*y* Fig. 1.

In said drawings, *a* represents an elliptical and conical case or shell, one end of which is closed by a partition *b* and the other end terminating in a pipe or discharge tube *c*. Entering this case *a* is an air pipe or tube *i*, leading from a blower or other suitable air forcing apparatus. One end of this pipe *i* terminates some distance from the end of pipe *c* and beyond the end of case *a;* the diameter of the pipe or tube *i* is less than the diameter of the discharge *c*. Entering the closed end *b* of case *a* are the suction tubes or pipes *g* and *h*, leading from the places where the air, gases, dust, shavings or similar matters to be removed, are situated.

Between the walls of the case *a* and tube *i* are placed partitions *m*, thus dividing the space in said case *a* into two separate compartments into which the tubes *g* and *h*, enter. The diameters of the dust conveying tubes *g* and *h*, are less than that of the compartment at the point where the tubes enter, but at the discharge end of said compartment or at the point where the compartment enters the tube *c*, the areas of the compartment and of the tubes *g* and *h*, (combined) are approximately equal. The partition *b* forms an air tight joint about the tubes *g*, *h*, and *i*.

The operation is as follows: Air is forced into the tube *i* by means of a blower or any other suitable means in the direction indicated by the arrows. The passage of the air from the end or outlet of said tube into the tube *c*, creates a vacuum or suction in the latter and also in the case *a*, and tubes *g* and *h*, thereby generating a strong current in said tubes, in the direction indicated by the arrows that is to say toward the discharge end of the tube *c*. The intermingling of the currents set up in the tubes *g* and *h*, within the case *a* is prevented by the partitions *m*, and each current passes separately through the case *a* into tube *c*. This construction increases the efficiency of the suction within the tubes *g* and *h* greatly since there are no cross currents, set up in the tubes or within the case *a* where the tubes terminate, to interfere with or lessen the suction.

It will be understood that there may be arranged a series of one or more débris conveying tubes *g* or *h*, (two being shown in the drawings simply for example) and that each tube may lead to separate points to remove or carry one or more matters into the discharge *c*. It is also to be understood that the form of the case *a* is made ellipsoidal simply for convenience and that any form of case may be used provided the same is flaring or bell shaped; the greatest diameter being at the point of entrance of the suction tubes and the smallest at the point of discharge into tube *c*.

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

The combination of the air conveying tube *i*, flaring case *a* and discharge tube *c*, with the suction tubes *g* and *h* entering the closed end of said case *a* and designed to convey gas, dust, shavings, &c., to said case *a*, and with the partitions *m* separating said case *a* into separate compartments into each of which one of said tubes *g* or *h* enters, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of October, 1892.

MARTIN ROSE RUBLE.

Witnesses:

ALFRED GARTNER,

WM. D. BELL.