

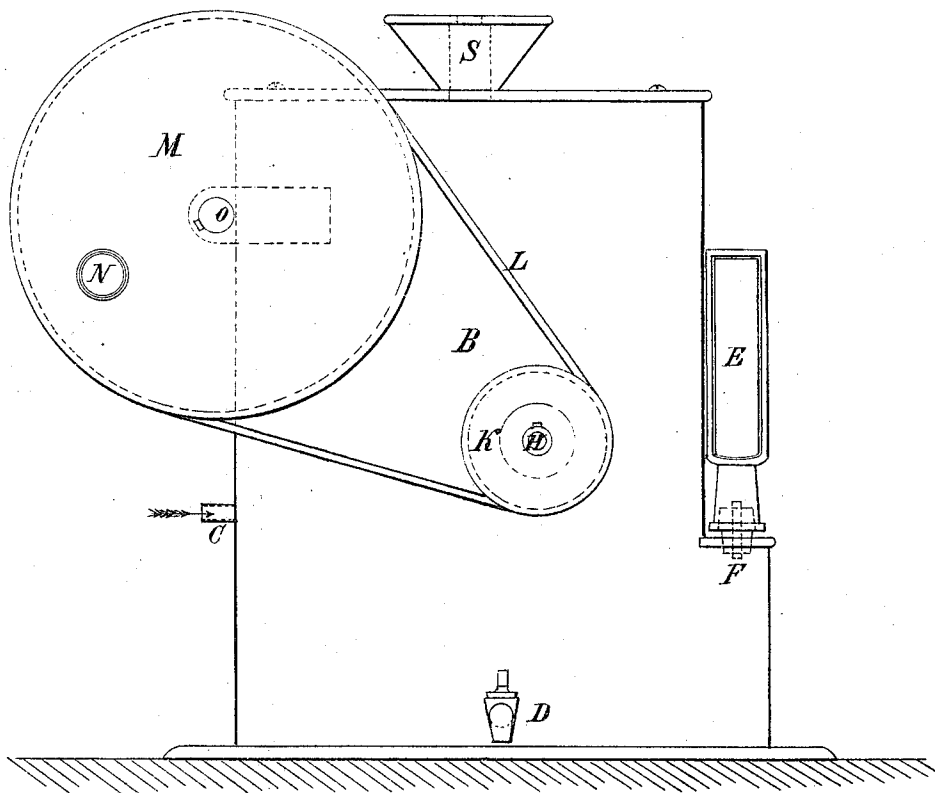
W. SCHEIDE.

Apparatus for Manufacturing Vinegar.

No. 134,441.

Patented Dec. 31, 1872.

*Fig. 1.*



WITNESSES

*H. W. Bentley,*  
*Michael Cook*

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INVENTOR.

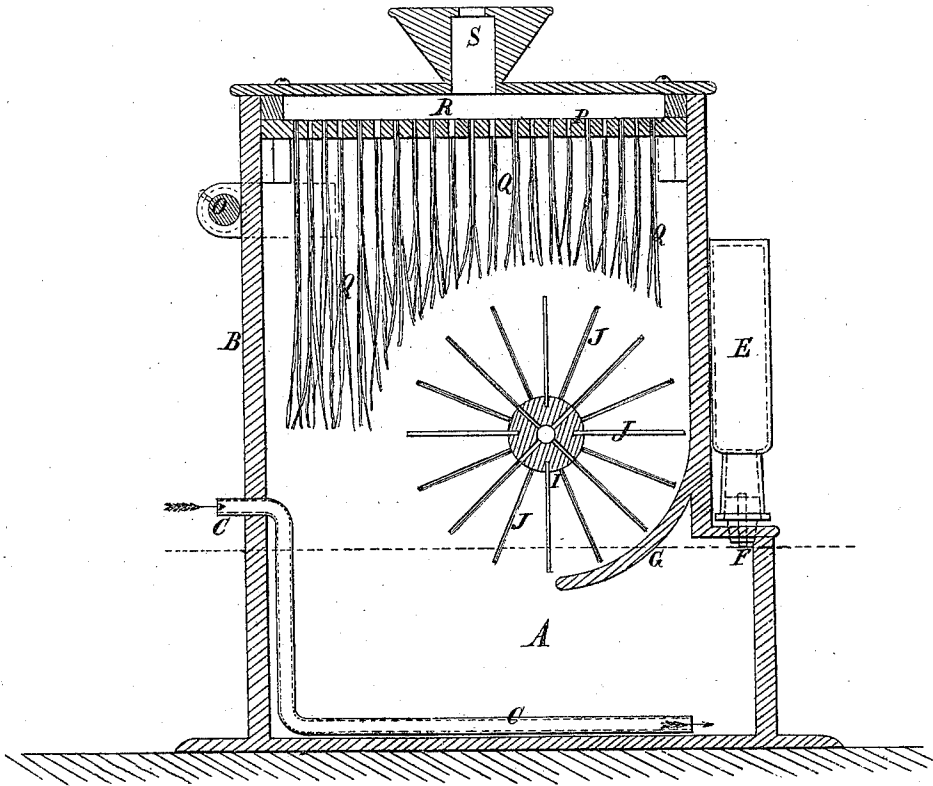
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Fig. 2.



WITNESSES

*H. W. Henry*  
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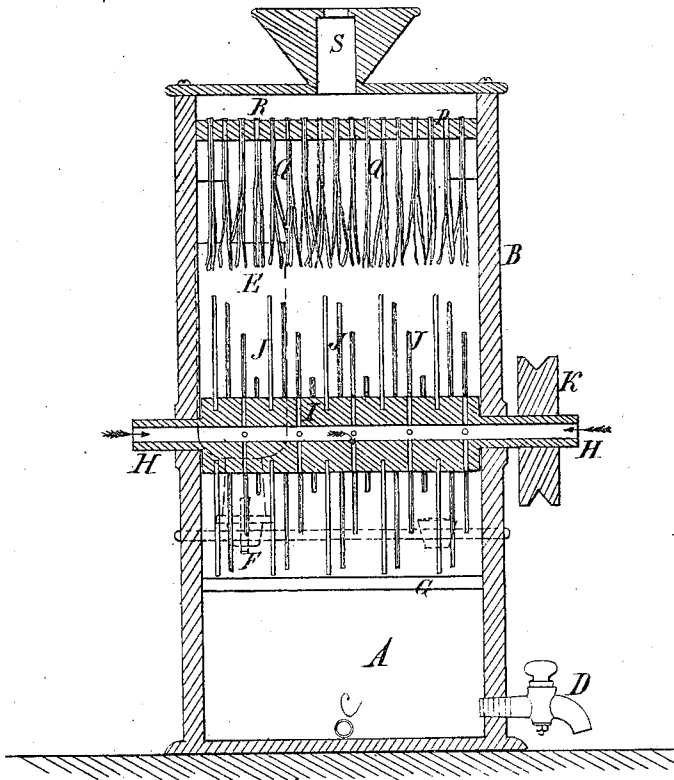
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Fig. 3.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM SCHEIDE, OF NEW YORK, N. Y.

## IMPROVEMENT IN APPARATUS FOR MANUFACTURING VINEGAR.

Specification forming part of Letters Patent No. 134,441, dated December 31, 1872.

*To all whom it may concern:*

Be it known that I, WILLIAM SCHEIDE, of the city, county, and State of New York, have invented, made, and applied to use an Improved Machine for the Manufacture of Vinegar; and that the following is a full, clear, and correct description of the same, reference being had to the accompanying drawing making part of this specification and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of my improved machine; Fig. 2 is a longitudinal sectional view of the same; and Fig. 3 is a transverse section of the same.

In the drawing like parts of the invention are pointed out by the same letters of reference.

The nature of the present invention consists in the construction, as more fully hereinafter set forth, of an improved machine for the manufacture of vinegar; the object being to expedite the manufacture of vinegar and to produce a superior article of vinegar at a comparatively low cost.

To enable those skilled in the arts to make and use my invention, the following description will be found sufficient.

A shows a tank to receive the liquid from which the vinegar is to be formed, which tank A also serves to support a box, B. C shows a pipe introduced into the tank A for the purpose of allowing steam or heated air to be conducted into the tank for the purpose of heating the liquid from which the vinegar is to be made to the proper temperature. D shows a faucet inserted in the tank A, so that a "proof" of the vinegar while in process of making may be drawn, or that the vinegar when made may be drawn from the tank. Upon the projecting portion of the tank A, so that communication may be had with the interior of the tank, is placed a reservoir, E, filled with strong vinegar. A tube, F, communicates from the reservoir E to the tank A, so that, should the liquid in the same at any time fall below the required level, the reservoir will supply vinegar to the tank. This end of the tank is also provided with an opening for the purpose of supplying liquid to the tank. G shows a dash-board projecting from and supported by the box B; this dash-board projects into the liquid contained in the

tank A. H is a hollow shaft inserted in and passing through the box B. This shaft supports within the box B a cylinder, I, formed of wood or any suitable material, and provided with a series of openings, and having inserted in it at intervals pieces J of willow, rattan, or broom-corn, made of suitable length to dip into the liquid contained in the tank A. Upon one end of the shaft H is keyed a pulley, K, connected, by the belt L, to the scored wheel M, provided with a handle, N, the scored wheel being supported upon the shaft O held in the box B. P shows a perforated board set in the box a short distance below the top of the same. This board is perforated to receive bunches of broom-corn Q, projecting downward and following the arc of the circle which the cylinder I describes in its revolution. The board is also perforated to allow the passage of air through the space R and to the funnel S.

Such being the construction, the operation is as follows: Either cider, alcohol and water, whisky, mash, or stale beer may be employed to form the vinegar, and is introduced into the tank A through the opening in the projecting part of the same. The reservoir E is filled with strong vinegar. The liquid in the tank is then acetified to the proper standard, and is brought to the proper degree of temperature by steam or heated air introduced into the tank through the pipe C. The cylinder I, supported by the hollow shaft H, is now set in motion, by means of the scored wheel M connecting with the pulley K, by turning the wheel M, or by any motor with which the machine may be connected, and commences its revolutions. As it revolves the pieces J of willow, rattan, or broom-corn are revolved through the liquid contained in the tank, agitating the same, and carry a portion of the same past and beyond the dash-board G and throw the same, in the shape of fine spray, up and among the bunches of broom-corn Q held in the board P, whence it drops or falls back into the tank A. While the cylinder is revolving air is drawn into the hollow shaft, and is introduced into the box through the perforations in the cylinder I, and is decomposed, supplying part of its oxygen to the liquid, while the balance of the air escapes through the perforations in the board P to the funnel S. The operation just described is continued

until the desired grade of vinegar is formed in the tank, when the same may be drawn off as desired.

A machine constructed as just described will be found to occupy but little space, is not liable "to foul" in its operation, is easily managed, and can be easily cleaned by introducing steam or hot water into it. In its operation the liquid is thoroughly mixed with air and is distributed over a large surface, where it is brought into contact with constant currents of air. This secures a better quality of vinegar.

Having now set forth my invention, what I claim as new is—

1. The combination of the tank A, box B, hollow shaft H, perforated cylinder I, and broom-corn Q and perforated board R, constructed and operating substantially as and for the purposes set forth.

2. In combination with the elements of the first clause of claim, the reservoir E and tube F, as and for the purposes described.

WILLIAM SCHEIDE.

In presence of—

A. SIDNEY DOANE,  
H. AARON.