

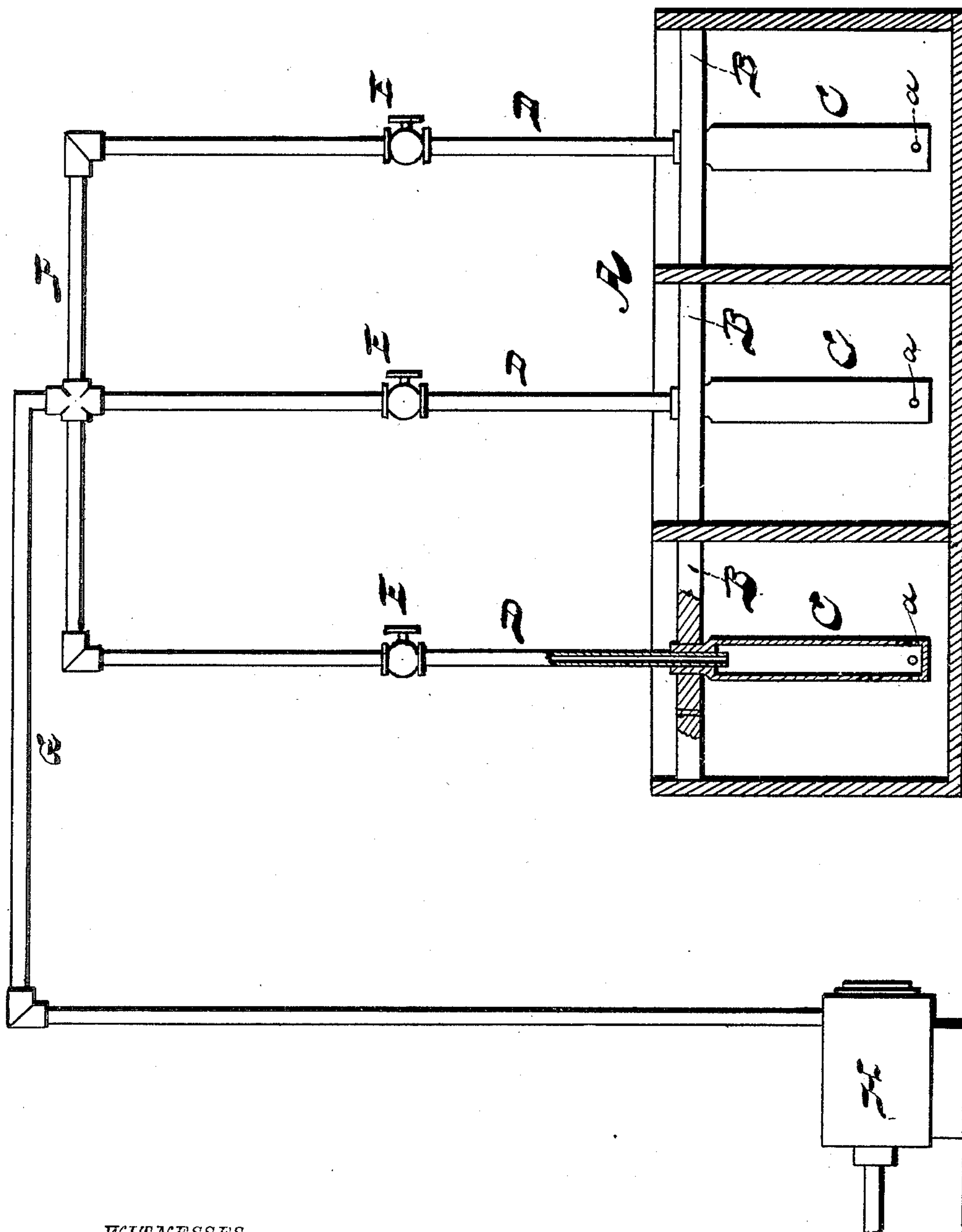
(No Model.)

A. T. BULL & W. HILL, Jr.

AGITATOR FOR TAN VATS.

No. 324,916.

Patented Aug. 25, 1885.



WITNESSES

*Chas. Stuart*  
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INVENTORS

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# UNITED STATES PATENT OFFICE

ARTHUR T. BULL AND WILLIAM HILL, JR., OF LIMESTONE, NEW YORK.

## AGITATOR FOR TAN-VATS.

SPECIFICATION forming part of Letters Patent No. 324,916, dated August 25, 1885.

Application filed June 13, 1885. (No model.)

*To all whom it may concern:*

Be it known that we, ARTHUR T. BULL and WILLIAM HILL, Jr., citizens of the United States, residing at Limestone, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Agitators for Tan-Vats; and we do 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 drawing, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in devices for agitating acids in tan-vats; and it consists in the construction and novel arrangement of devices, as will be hereinafter fully explained, and particularly pointed out in the appended claim.

The annexed drawing, to which reference is made, fully illustrates the invention, in which the figure represents a vertical sectional view.

Referring by letter to the accompanying drawing, A designates the vat, which is constructed in the usual well-known manner, having the supporting-strip B, to which is attached at its upper end the tube or pipe C, having at its lower end lateral perforations *a*, forming an exit for the air which is therein introduced, as will be further herein explained.

Connected to the tubes C, and communicating therewith, are the pipes D, which are provided with valves E, whereby the air may be partially or wholly shut off from the vat when

desired. To these pipes is attached a horizontal pipe, F, having a branch pipe, G, which leads to the air-pump H, thus providing a continual passage through all the pipes and tubes from said pump to the lateral or distributing air-opening in said tubes.

It will be seen that when the pump is set in motion the air is forced through all the pipes and is received into the tank through the lateral openings in the lower end of the tube, thus being equally distributed in said tank, and thereby agitating the acids contained therein while the tanning process is in operation.

We are well aware that in the process of tanning leather it is common to agitate the liquor in the vats by forcibly injecting air therein. This feature, broadly, we disclaim.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

A tanning apparatus consisting of a subdivided vat, each covered compartment of which is provided with a pipe or injector, C, suspended therein and perforated near its bottom, in combination with vertical pipes D, provided with regulating-valves, the horizontal pipe F, an air-supply pipe, G, and an air-forcing engine, as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ARTHUR T. BULL.  
WILLIAM HILL, JR.

Witnesses:

S. DEGEN,  
JAS. GREENWOOD.