JILLSON & WHINFIELD.

Bleaching Apparatus.

No. 13,650. Patented Oct. 9, 1855.

Fig: 2.

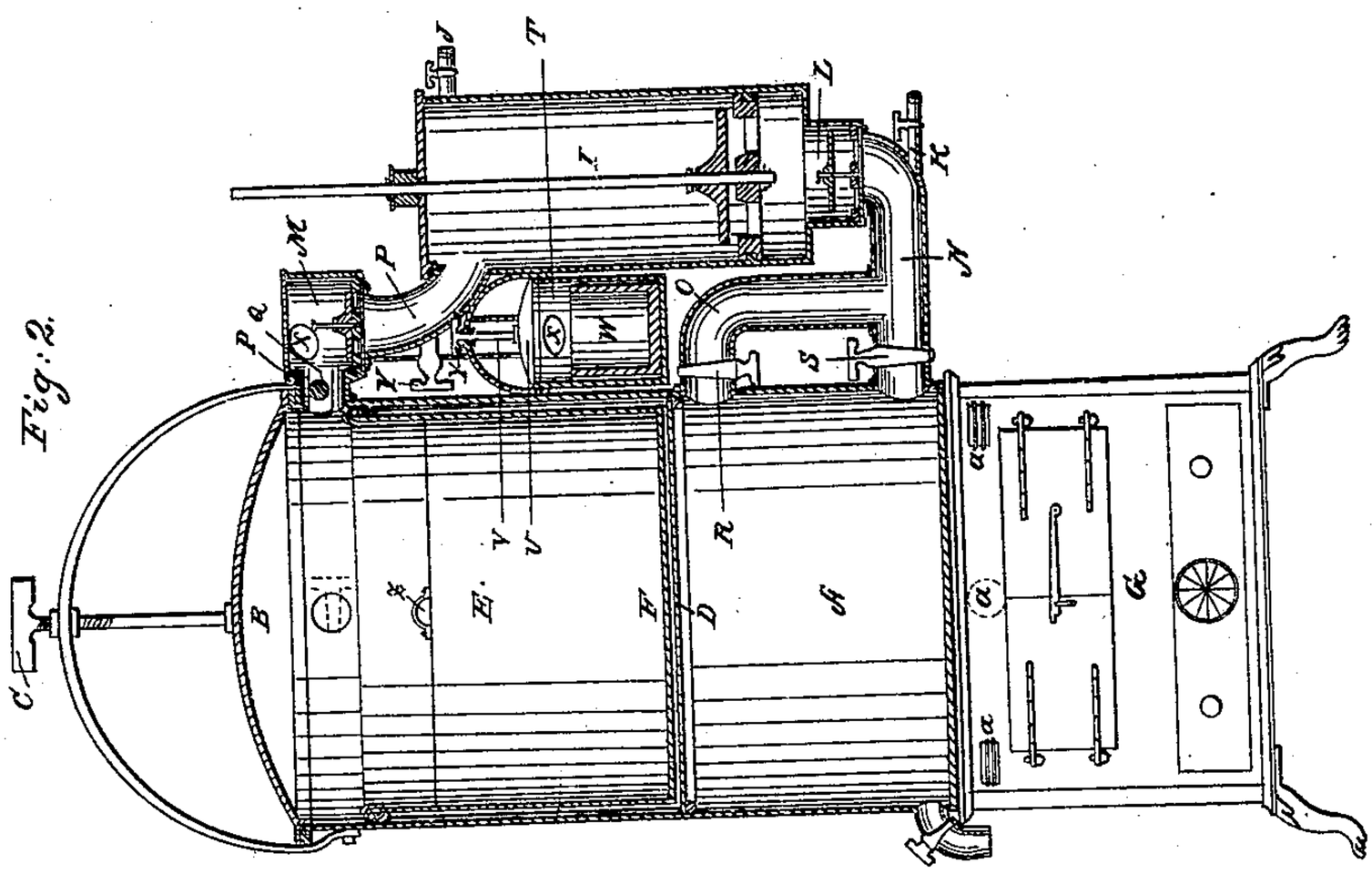
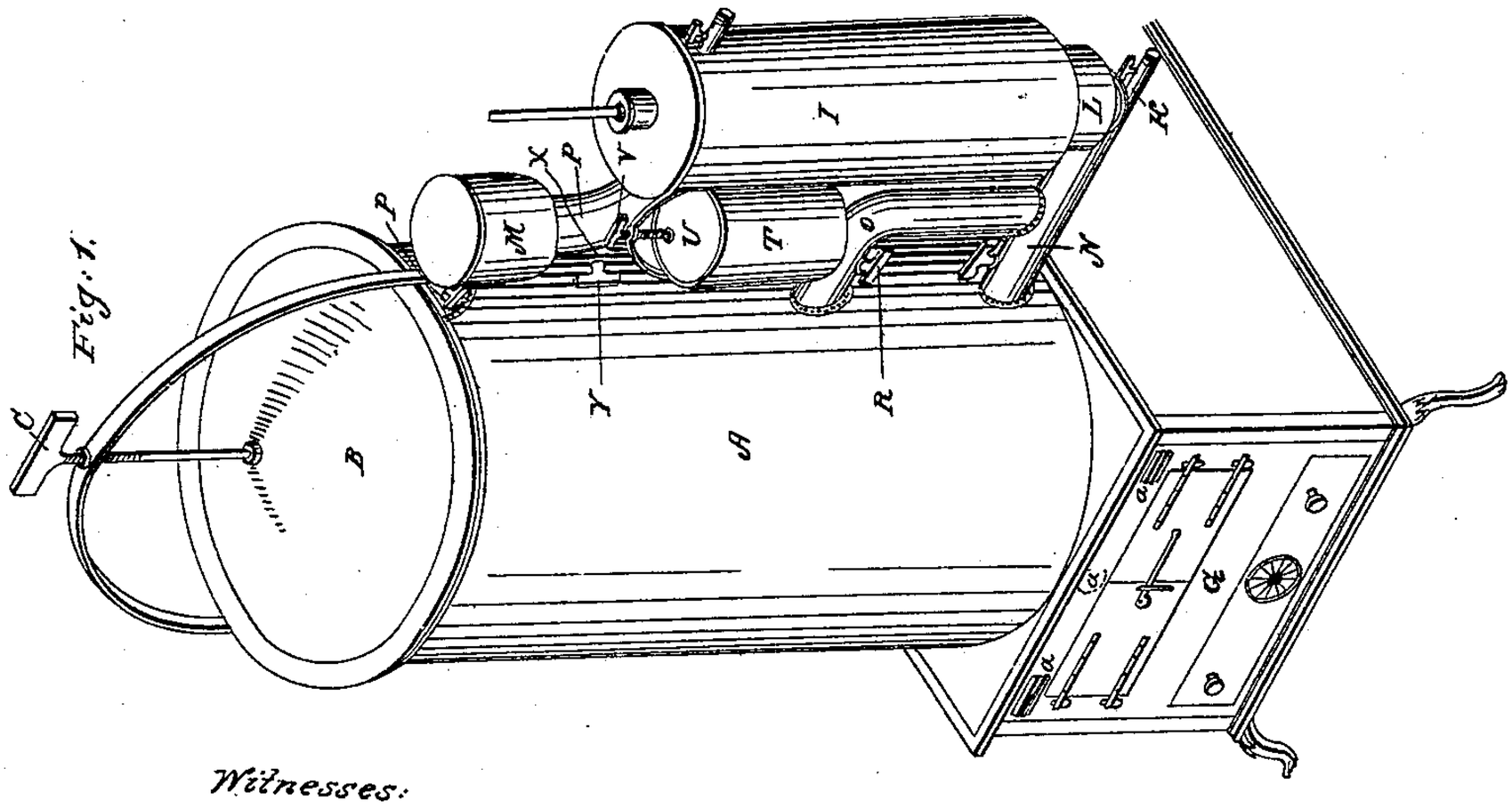


Fig: 1.



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UNITED STATES PATENT OFFICE.

J. A. JILLSON AND H. WHINFIELD, OF POUGHKEEPSIE, NEW YORK.

APPARATUS FOR WASHING AND BLEACHING FIBROUS AND TEXTILE SUBSTANCES.

Specification forming part of Letters Patent No. 13,650, dated October 9, 1855; Reissued July 24, 1866, No. 2,320.

To all whom it may concern:

Be it known that we, JULIUS A. JILLSON, of the city of Poughkeepsie, county of Dutchess, and State of New York, and HENRY WHINFIELD, of the city, county, and said State, have invented new and useful Improvements in Washing Articles of Wearing-Apparel and Various Textile and Fibrous Substances and Materials; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, representing the machine, in which—

Figure 1 is an elevated perspective view, and Fig. 2 is a vertical sectional view, the same letters having reference to the same parts in each view.

A, is the cylinder.

B, is the air tight cover.

C, is a set screw in a movable arch confining the cover B.

D, is a strainer fixed or movably made of metal, cloth, or paper or their equivalent resting on a rib or bracket in the cylinder A.

E is a movable inside cylinder with strainer F made similar to strainer D.

G is a furnace under cylinder either for heating air or liquids.

H is a cock to run off the liquids or refuse.

I is a double or single acting force pump with valves, piston and piston rod to be driven by hand or power. J and K are cocks on said pump for air or liquid.

L is a valve and chamber at bottom of pump.

M, is valve and chamber at top of pump.

N, is pipe connecting bottom of cylinder A with the lower valve L of pump.

O is pipe connecting with cylinder A and valve L.

P, is pipe connecting top of pump with top of cylinder A and passing through valve M.

Q R and S, are three stop cocks for changing the working of the machine herein described.

T, is a small chamber connected with pump I and cylinder A, by the pipe X.

U, is a cover to small chamber T.

V is a set screw confining the cover U, air tight.

W is a glass cup or dish in said small chamber T.

Y is a stop cock in pipe X.

Z is a movable cover used in the inner cylinder E or in the cylinder A perforated similar to the strainer D or F for the purpose of keeping the wearing apparel, &c., substances or other materials in said cylinders E and A, level and of a uniform height and also making a uniform distribution on the surface of the contents of said cylinders A and E.

a a, is a pipe pressing through and around furnace G, and connected with the top of cylinder A at *b b* with a shut cock C, C, when not used.

To enable others skilled in the art to make and use our invention we will proceed to describe its construction and operation. We construct the said machine of any suitable material such as brass, copper, zinc, tin, iron galvanized or wood or their equivalents of any given size or shape suitable or equivalent to perform and operate on the various textile and fibrous fabrics or substances. The method of washing or cleaning the said wearing apparel and the various textile fabrics or substances or dirt and gum from animal or vegetable woods, silks rags and all other materials or substances of a similar nature is by placing any of the last named articles, materials or fabrics in the cylinder A or E and having also placed a sufficient or desired quantity of cleaning liquid in the cylinder A, made of soap or any other composition or equivalent either hot or cold as the case may require, and the pump being set in motion our said method commences either in the ordinary way or by force or in a vacuum or partial vacuum either by heat or otherwise made in said machine or similar or equivalent by opening the stop cocks R and J and closing the stop cocks K, P, Y and S a vacuum or partial vacuum will be obtained, and having all the stop cocks closed except S and Q which are open and a sufficient or desired quantity of cleaning liquid having been placed in the said cylinder A with the said articles, materials or fabrics &c., before named and working the pump as before described the cleansing liquid is forced and rotated through and through the said wearing apparel and the various textile and fibrous fabrics or substances or animal or vegetable wools, silks, rags and all other materials of a similar nature without rubbing or injuring the same, until in a short time every

particle of dirt or gum, &c., is removed and taken out and refuse or dirty liquid discharged by the cock H or retained in any suitable place for colored clothes, &c. Then by opening the cock K which is or can be connected with either hot or cold water a stream of clean water can be introduced for rinsing purposes and rotated through and through and continued and changed until in a few minutes the contents of the said cylinders will be entirely cleansed and rinsed without removing, twisting, or injuring the said contents of said cylinders.

By the machine the articles after being washed and rinsed can be dried under its operation in this way by closing the stop cocks S, Y and Q and removing the cover B of the cylinder A when cold air is used and rotating the pump a stream of air is drawn through the contents of said cylinders A and E and discharged at J, or with hot air when required by closing the said stop cocks S, Y, K and Q and opening the stop cock C which admits hot or heated air through the pipe *a*, *a*, from the furnace G, by the pipe *b* into the top of the cylinder A with the cover air tight and the stop cock J open, then rotating the pump a current or stream of heated air will be forced continuously through and through the said contents of said cylinders until in a very short time they will be dried sufficiently for ironing.

There is attached to this machine as shown by letter T, a small chamber or vessel with pipes connecting to said machine for the purpose of generating and passing into the washing chamber or cylinder A and E, bleaching or disinfecting gases or liquid by closing the stop cocks J, R and S will escape from the said chamber T by the pipe X, then open the stop cocks R, Y and P rotate the pump and the said bleaching or disinfecting gases or liquids are forced through and through over and over in a vacuum or partial vacuum or in the ordinary way until in a very short time the contents of the said cylinders A and E will be perfectly bleached or disinfected and then by closing the stop cocks J, K, P and S the said bleaching or disinfecting gases or liquids can be nearly all forced back into the small chamber T, and retained in the same by closing the stop cock Y until wanted again the cylinder A can then be opened and contents removed. In fact, the washing or cleansing, rinsing, bleaching, and drying can be completed without taking any of the aforesaid articles, materials or substances out of by a machine constructed according to the description substantially.

Having now described and fully set forth our invention, what we claim as new and desire to have secured to us by Letters Patent is—

Combining with the washing, extracting or receiving chamber the double acting force pump and the disinfecting or bleaching vessel operating substantially as and for the purposes herein set forth.

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