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*JACOB W. ROSSMAN'S*

Improved

**PAPER-STOCK BLEACH**

No. 122,783.

Patented Jan. 16, 1872.

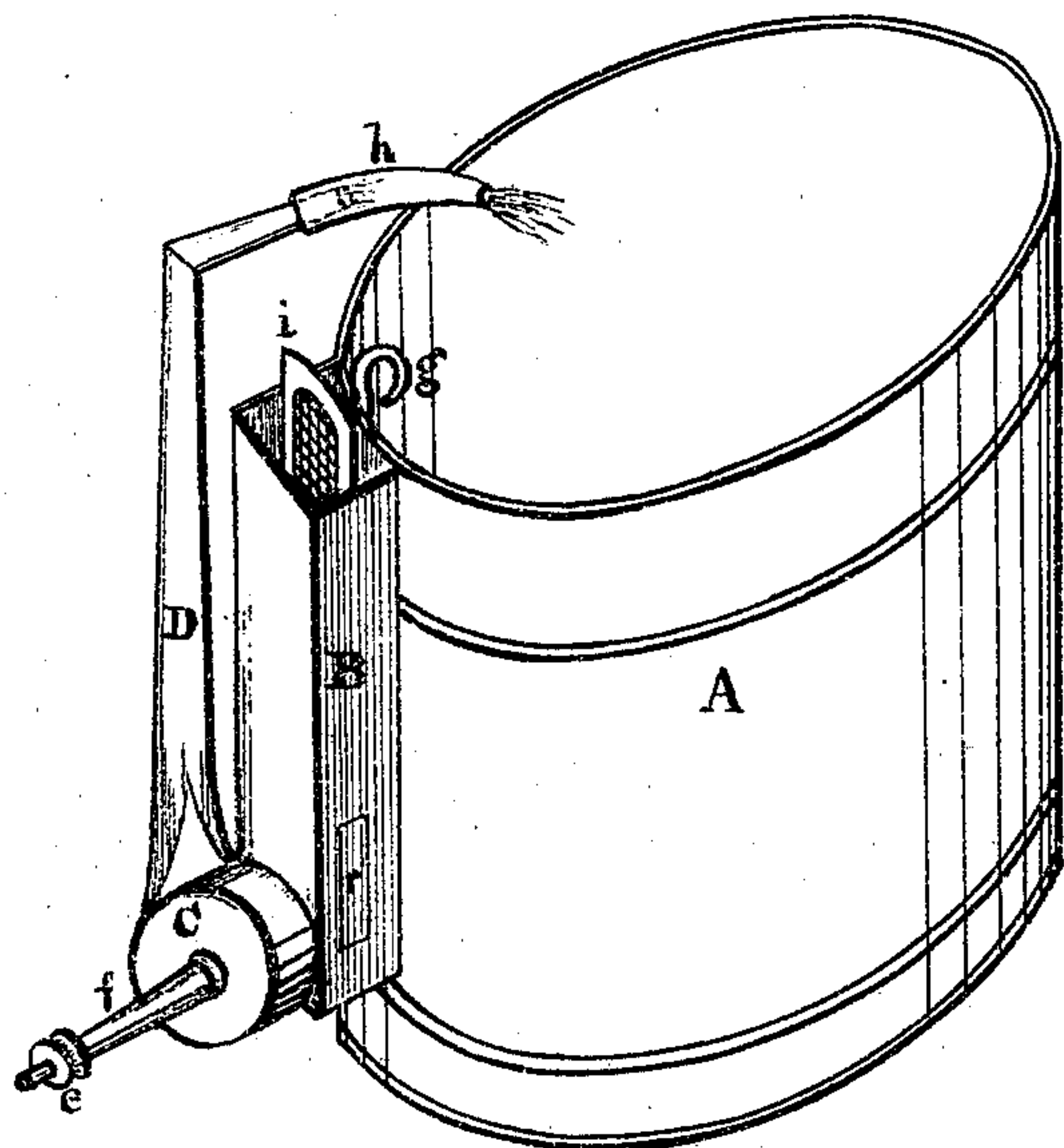


Fig. 1.

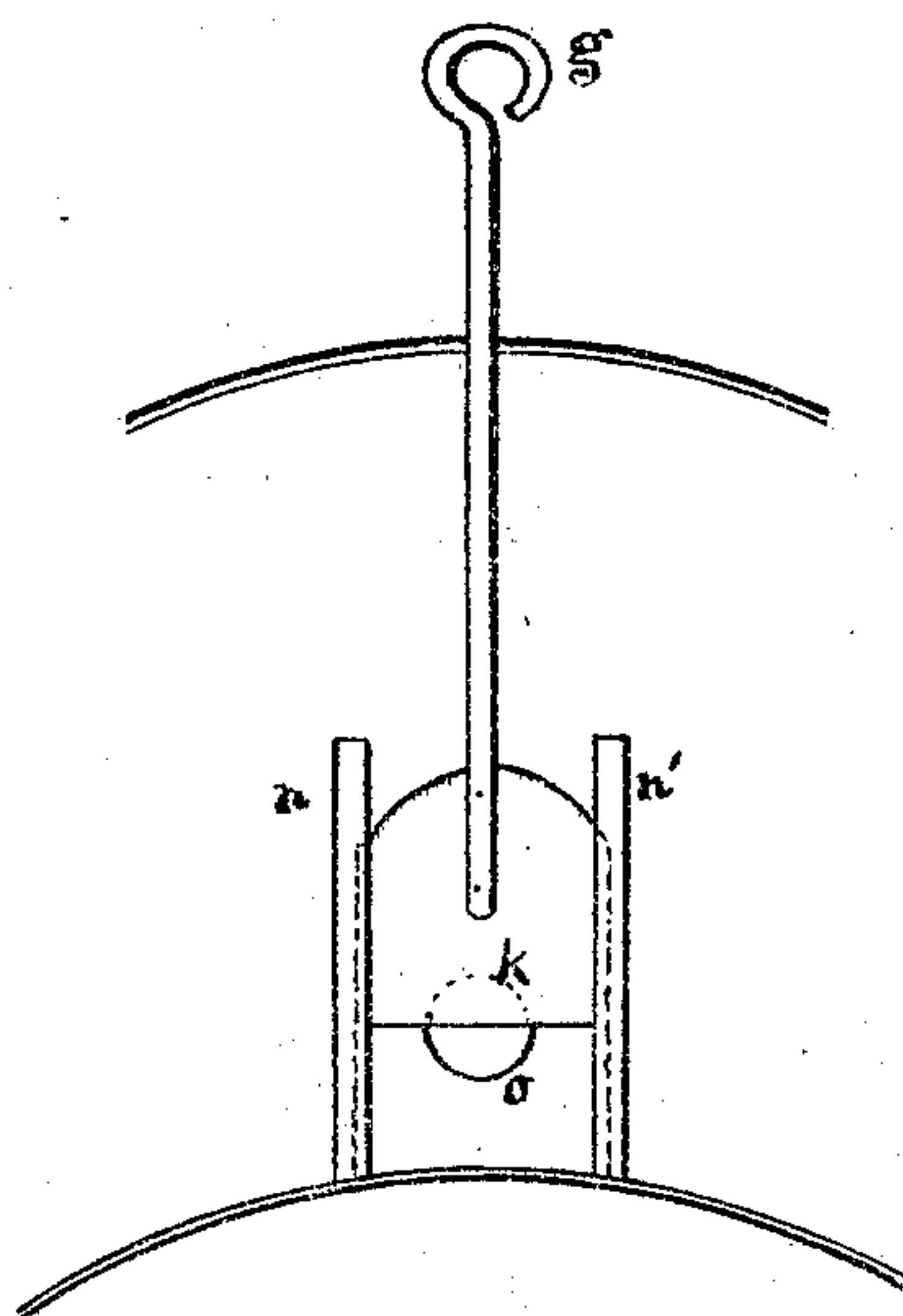


Fig. 2.

Witnesses.

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# UNITED STATES PATENT OFFICE.

JACOB W. ROSSMAN, OF STOCKPORT, NEW YORK.

## IMPROVEMENT IN PAPER-STOCK BLEACH.

Specification forming part of Letters Patent No. 122,783, dated January 16, 1872.

### SPECIFICATION.

I, JACOB W. ROSSMAN, of the town of Stockport, in the county of Columbia and State of New York, have invented certain Improvements in the Construction of a Paper-Stock Bleach, of which the following is a specification:

#### *Nature and Objects of the Invention.*

My invention consists in the combination of a rotary, centrifugal, or other pump with a straw-paper bleach-vat or reservoir, for the purpose of "wetting down" the contents of the bleach; and also, in combination therewith, of a cut-off and a screen-box, for the purpose of preventing the straw from getting into the pump when the liquor is being drawn from the bottom and transferred to the top of the stock in the bleach.

#### *Description of the Accompanying Drawing.*

Figure 1 is a perspective view of the bleach-tub with my improvement attached. Fig. 2 represents the cut-off on the inside of the bleach-tub, which slides over the aperture leading into the screen-box near the bottom.

#### *General Description.*

A is the bleach-tub or reservoir. B is a screen-box, attached to the outside vertically, and extending from near the bottom to the top of the bleach. This box is provided with a wire-screen partition, *i*, which extends from the bottom to the top, dividing it vertically into two equal or nearly equal parts. To the outside of this box, at its bottom, I attach a rotary centrifugal pump, C, with the working-shaft extending through case *f*; and upon the end of this shaft I attach a pulley, *e*, which is connected by a belt with the motive-power of the mill. To this rotary pump is attached the conducting-pipe D, with elbow at top, on which is placed a piece of hose, *h*, of convenient length and sufficiently flexible to enable the liquor to be directed to all parts of the bleach. *g* is the handle of the rod, to the bottom of which is attached the cutting-plate *k*, answering the double purpose of a slide-valve for keeping

back the liquor, and, being sharp at bottom, of cutting off any straw that may chance to pass into the aperture *o* with the liquor, and thus prevent its clogging up or being obstructed. It is provided with guides or keep-bars *n n'*, one on each side, to keep it in place. I place a small door or slide, *p*, in the side of the screen-box to clean it out if necessary.

When it is desired to fill the bleach it is first provided with a sufficient quantity of lime-liquor; the straw is then thrown into it until it is thought proper to begin to "wet it down." The pump is now started and the liquor drawn from the bottom through aperture *o*, and discharged through hose *h* upon the top of the straw, which causes it to settle down so as to admit more to be put in; and this is continued until the whole is thoroughly saturated or "wet down," and as much in the bleach as it will contain.

The plan commonly employed to fill a bleach is to introduce steam into the bottom through a pipe and conduct it up, with the liquor inside the bleach, to the top of the straw by attaching a larger pipe temporarily. This is not only troublesome but expensive, drawing off the steam required for other purposes, and thereby requiring extra labor and an extra quantity of fuel to keep up the steam.

As the motive-power of paper-mills is generally water, this is employed in my arrangement to operate the pump, and to do what the steam has heretofore been employed to do.

My device works equally well whether the liquor be hot or cold, and effects a saving in the time and labor required for filling the bleach as well as in fuel.

What I claim as my invention is—

1. The combination of screen-box B and cut-off *k* with reservoir A, substantially in the manner and for the purposes herein described.

2. The combination and arrangement of pipe D, pump C, screen-box B, orifice *o*, and cut-off *k*, as, or substantially as, and for the purpose herein set forth.

Witnesses: JACOB W. ROSSMAN.

SAMUEL EDWARDS,  
SHERMAN VAN NESS.

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