

C. S. WILLIAMS.

Improvement in Washing-Machines.

No. 127,444.

Patented June 4, 1872.

Fig. 1.

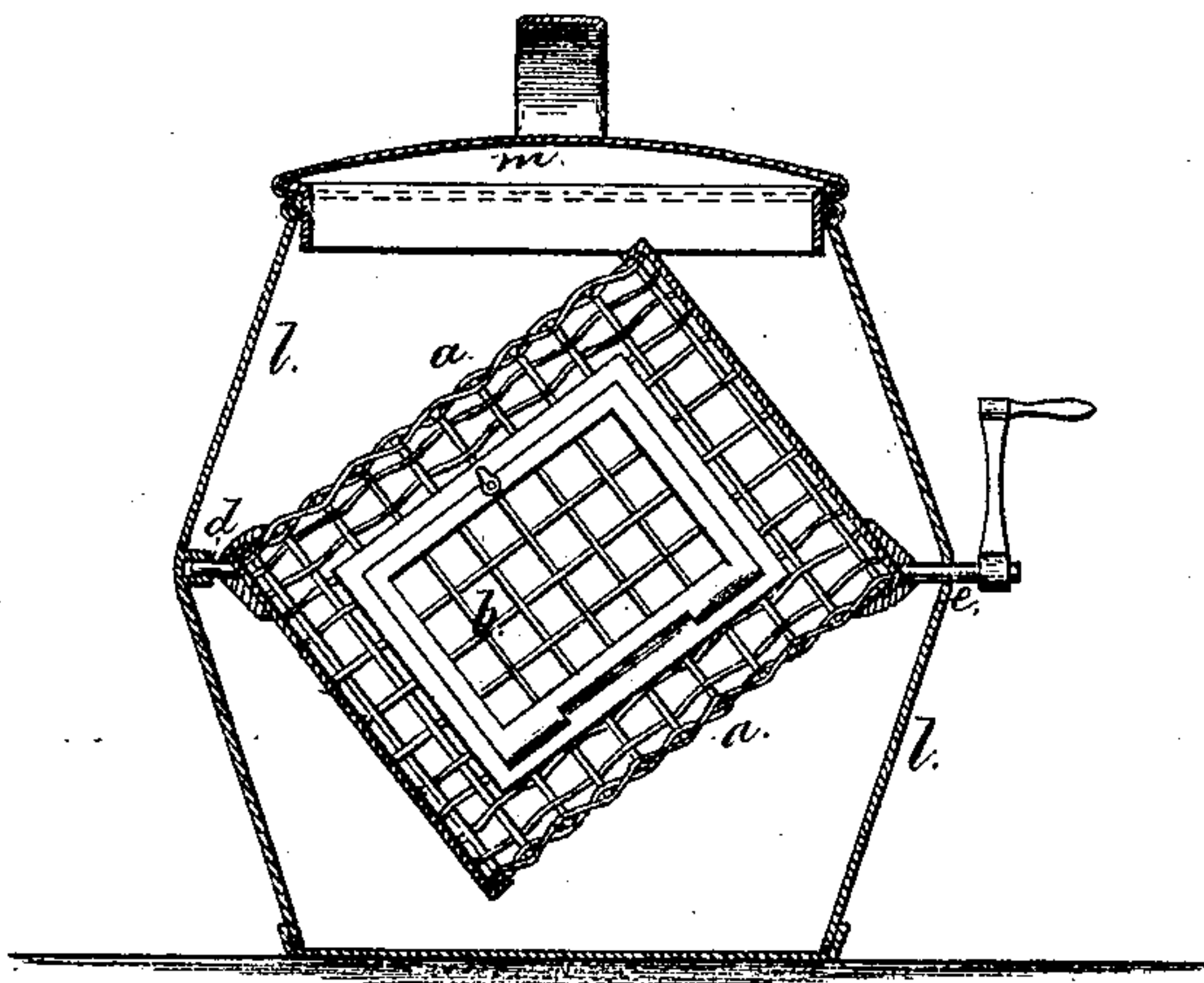
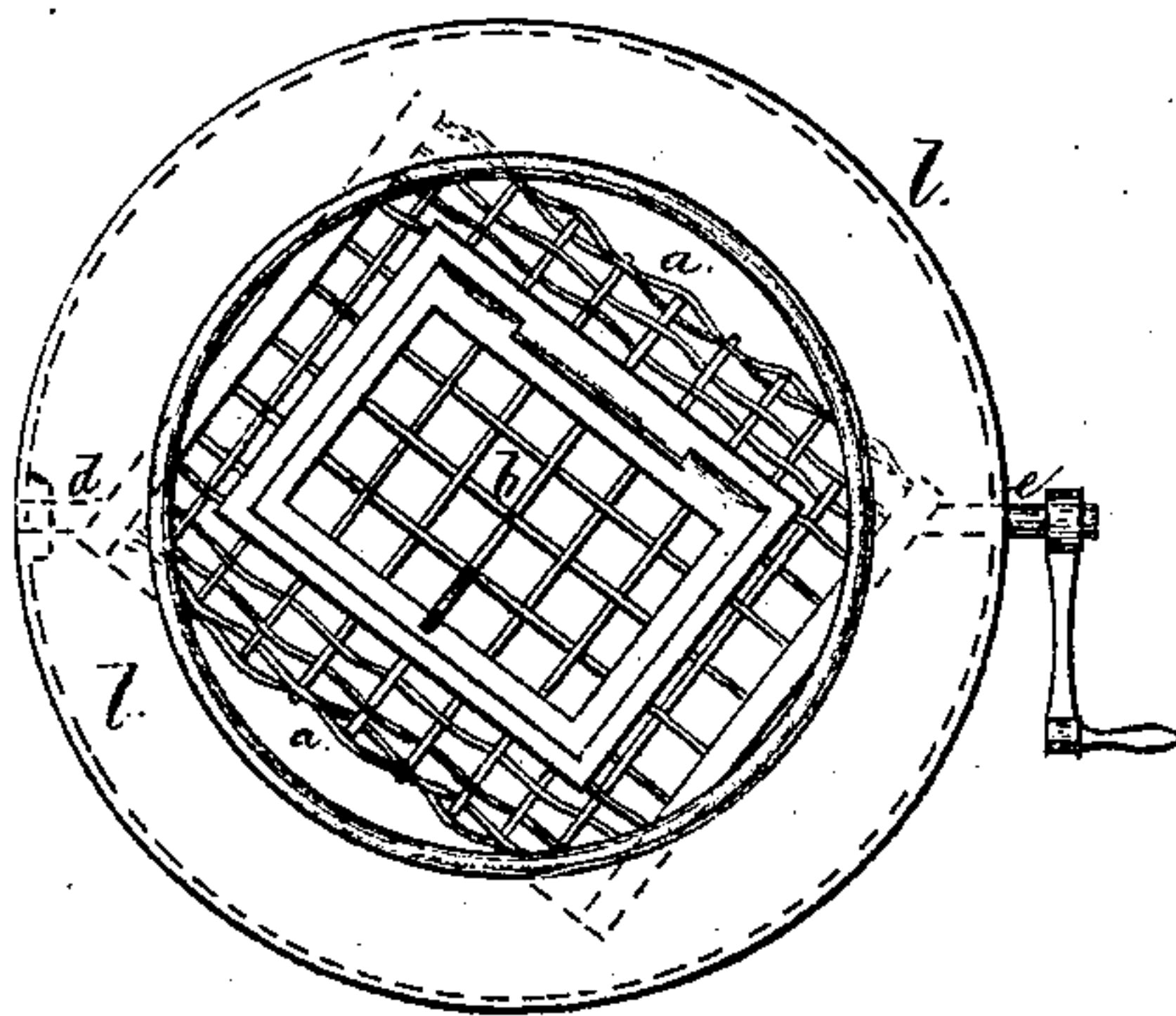


Fig. 2.



Witnesses,

Charles Smith
Edw. T. Finckney

C. S. Williams
Lemuel W. Serrell
att'y

UNITED STATES PATENT OFFICE.

CHRISTOPHER S. WILLIAMS, OF NEW ROCHELLE, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 127,444, dated June 4, 1872; antedated May 17, 1872.

To all whom it may concern:

Be it known that I, CHRISTOPHER S. WILLIAMS, of New Rochelle, in the county of Westchester and State of New York, have invented an Improvement in Washing-Machines; and the following is declared to be a correct description thereof:

A washing-machine has been made in which the clothes are contained in a tight box or barrel, hung upon a shaft or trunnions placed at opposite edges or angles of said box or barrel, so that the contents of such vessel have a compound movement as the vessel is revolved; thereby the clothes are thrown from end to end.

My invention consists of a cylinder of open-work, mounted upon trunnions at opposite edges or angles at an inclination to the axis of such cylinder, in combination with a vessel containing such cylinder and the washing-water, so that the difficulty of closing the cylinder tightly is removed, and the washing-water passes freely through the perforations of the open-work cylinder, and the clothes are dashed about in said water by the turning of the said cylinder. The inclosing-case is made of a double conical form, so as to allow the said cylinder to revolve freely, but not to contain a large quantity of water. This washing-machine also can be used as a wash-boiler, and the clothes subjected to agitation while being boiled.

In the drawing, Figure 1 is a vertical section of said apparatus, and Fig. 2 is a plan of the same.

The cylinder *a* is made of woven wire or open-work, with an opening or door, *b*, at one side, to give access in introducing or removing the clothes to be washed; and I prefer to make this door of woven wire, hinged, and provided with a button or catch. The trunnions *d e* are attached at opposite sides and ends of the cylinder *a*, so that the axis of revolution is diagonal to the axis of the cylinder; thereby the clothes in such cylinder will be subjected to a violent agitation, and be dashed from end to end of the cylinder by the revolution of the same; and the trunnion *e* is projected through the containing-vessel *l* and provided with a

crank, so as to revolve the open-work cylinder *a* at a moderate speed, as may become desirable for washing the clothes in the most effective manner.

A packing may be introduced at the place where the shaft or trunnion *e* passes through the vessel *l*; and a cover, *m*, should be provided for this washing-machine.

It will now be understood that this washing-machine possesses the capacity of a wash-boiler, having features that are preferable to many others. The clothes are kept from contact with the inclosing-vessel *l*, hence the water has opportunity to circulate freely; and, by agitating the articles in the boiling water, the dirt will be very rapidly removed.

When used simply as a washing-machine the heavy dirty matter can subside in the vessel *l*, instead of remaining with the clothes in the cylinder *a*.

The vessel *l* should be as small as possible, and at the same time allow the cylinder *a* to revolve. By constructing this vessel *l* of a double conical form, as shown, the necessary space will be provided, and the vessel *l* approximates to the shape of the figure described by the cylinder *a* as it revolves on its diagonal axis; and at the same time this form of cylinder is of far greater strength than if made with straight sides, besides being cheaper to manufacture. The conical sides force the water back through the open-work cylinder, and thereby greatly increase the effectiveness of the washing operation.

I claim as my invention—

1. The cylinder *a*, of open-work or perforated, and mounted, within the water-containing vessel *l*, upon trunnions diagonal to the axis of the cylinder, as and for the purposes set forth.

2. The double conical vessel *l*, in combination with the open-work cylinder *a*, forming a washing-machine or boiler, substantially as set forth.

Signed by me this 8th day of November, A. D. 1871.

C. S. WILLIAMS.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.