(No Model.)

L. PETERSON.

WASHBOARD.

No. 547,284. Patented Oct. 1, 1895.

Fig. 1.

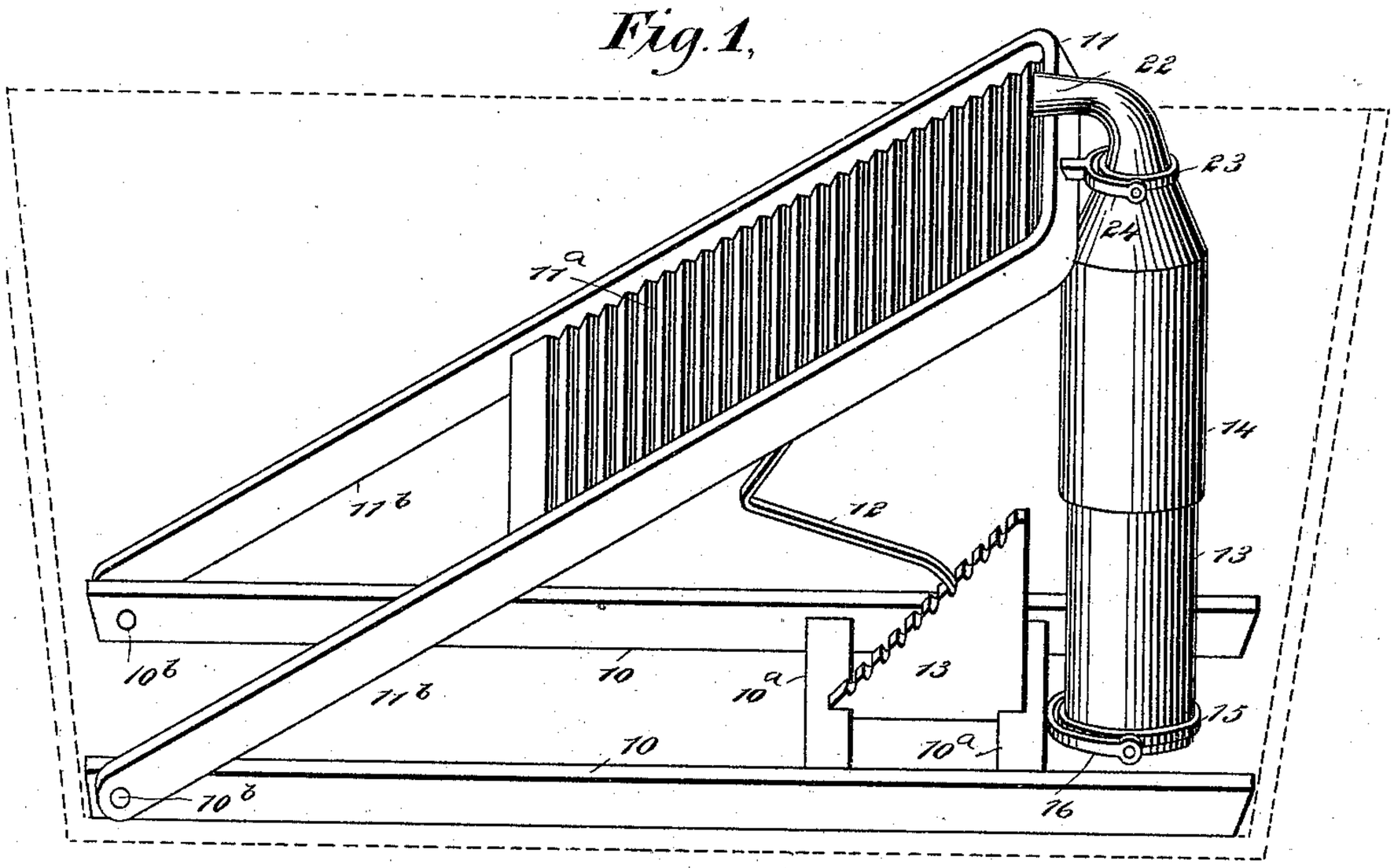
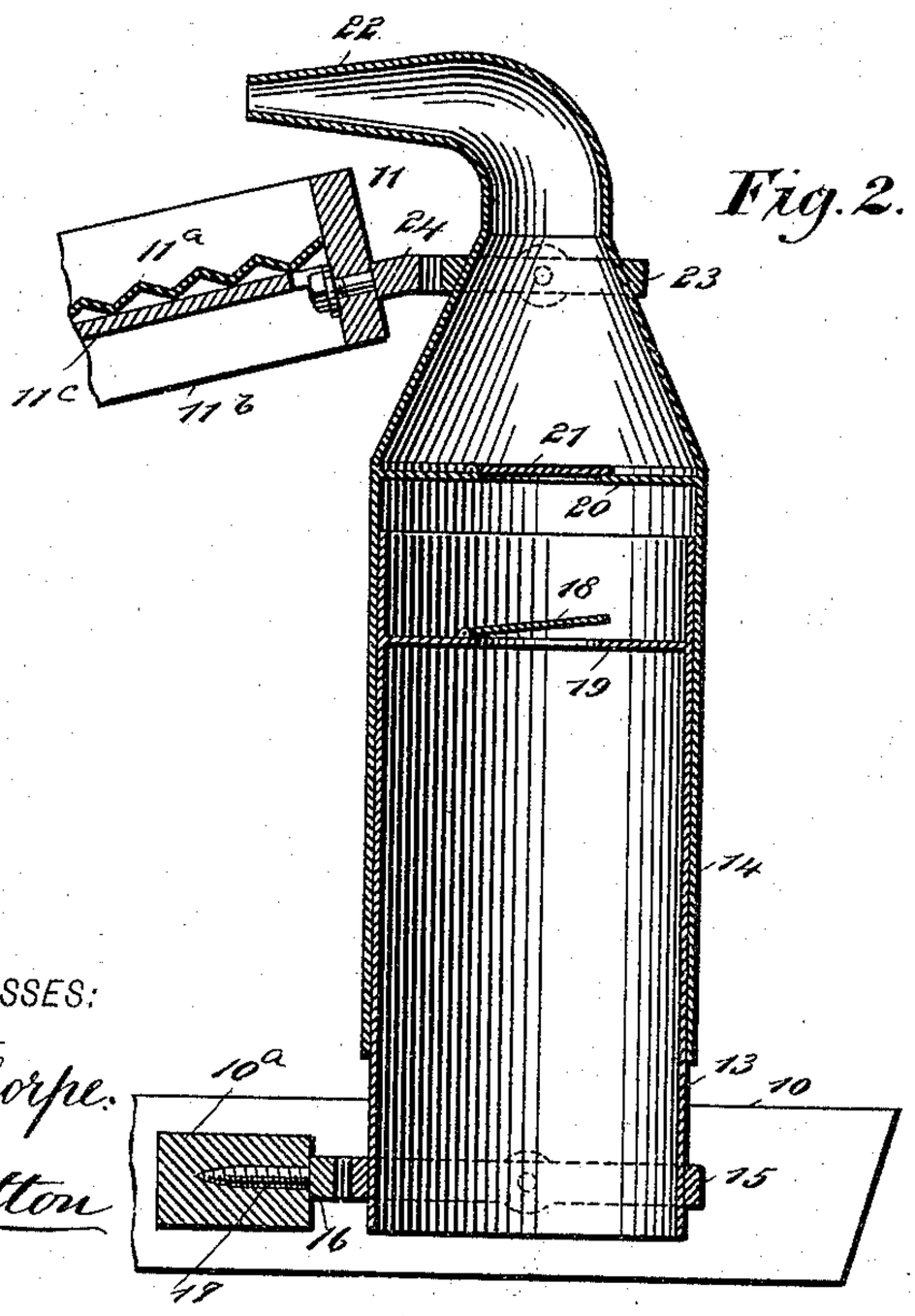


Fig. 2.



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LEWIS PETERSON, OF MADRID, IOWA.

WASHBOARD.

SPECIFICATION forming part of Letters Patent No. 547,284, dated October 1, 1895.

Application filed March 23, 1895. Serial No. 542,922. (No model.)

To all whom it may concern:

Be it known that I, LEWIS PETERSON, of Madrid, in the county of Boone and State of Iowa, have invented a new and Improved Hydraulic Attachment for Washboards, of which the following is a full, clear, and exact description.

This invention relates to an improved hydraulic attachment for an ordinary washboard, which is adapted to throw a stream of hot or cold water from a washtub onto clothing or other fibrous material that is being rubbed on the washboard and thus greatly facilitate the washing operation, reduce time consumed in rubbing the goods, and lessen the labor incidental to such an operation.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both of the views.

Figure 1 is a perspective side view of the improvement applied to a washboard, and also shows in dotted lines a washtub wherein the apparatus is located; and Fig. 2 is a sectional side elevation of the improvement connected to an end portion of a washboard.

The improvement is particularly well adapted for use in connection with a common washboard and an ordinary movable or stationary washtub, and in carrying out the invention it is shown in connection with such laundry apparatus.

In Fig. 1 a frame is shown comprising two strips 10, preferably of wood, and held spaced apart by cross-bars 10^a, the strips having such a length as will permit the frame to be seated in a washtub of ordinary dimensions, and which may be such as is indicated by dotted lines in Fig. 1.

The washboard 11 is of common construction, having any approved rubbing-surface 11^a, and, as shown, the lower ends of the side bars 11^b of the washboard are pivoted to the ends of the frame-strips 10, so that the washboard may be held inclined and rocked on said pivots 10^b. The washboard is maintained in an inclined position by a preferably bent spring-arm 12, that is fastened by one end to the lower surface of the back piece 11^c that supports the rubber 11^a, the free end of the arm being projected downwardly and away from the pivoted end of the frame. On the cross-bars 10^a an inclined rack 13 is secured, the teeth of which are designed to receive the toe or free end of the spring-arm 12, and it will be seen that the elasticity of the arm will permit it to receive such adjustment as will cause its toe to enter between different teeth on the rack and thus sustain the board 11 at any desired inclination with regard to the frame-strips 10, which are supposed to be in a horizontal plane when the improved washing apparatus is ready for use.

The most essential feature of the improvement comprises a water lifting and ejecting device, constructed essentially as follows: A cylinder composed of two sections 13 14 is provided, which sections have a telescopic connection with each other, and preferably the lower section 13 is adapted to slide with a tight joint in the upper section 14. The lower section 13 has a rocking connection between its lower end and the adjacent cross-bar 10^a, the preferred means for connecting said parts consisting of a ring 15 encircling and affixed to the lower end of the section 13, from which ring diametrically-opposite pintles are projected and have a loose engagement with perforations in the semicircular yoke-piece 16, the latter being provided with a screw-shank 17 screwed into the side of the said cross-bar 10^a, as clearly shown in Fig. 2.

It is evident that the ring 15 may be dispensed with and the pintles be formed on the section 13, or the ring 15 may be perforated and said pintles be formed on or secured to the yoke-piece 16 and project inwardly therefrom for engagement with the perforations in the ring and the same result be attained. It is therefore to be understood that the construction of the device in this particular is not to be limited to the exact construction shown in the drawings.

A valve 18 is located in or on an apertured transverse partition-wall 19, secured in the lower section 13, near its upper end, and the said valve may be a flap-valve, as shown, or any other style of valve that is suitable for the purpose, it being essential, however, that the valve be adapted to open upwardly when pressed on from below the wall 19 by water that may be caused to rise in the section 13.

There is an apertured transverse partition

wall 20 affixed in the upper cylindric section 14, and a valve 21, preferably of the flap style, is arranged within the section named above the partition or diaphragm wall 20, so as to be adapted to open the aperture in said partition-wall when water or air presses on the lower side of the valve 21. The upper portion of the cylindric section 14 is preferably constricted in diameter as represented, and terminates in a laterally-projecting nozzle 22, that for efficient service is flattened and thus adapted to throw a thin sheet of water from its slit-like opening. It is feasible to make the nozzle separate from the cylindric section 14 and attach it thereto, and the latter may be shaped differently at its upper end from the form represented; but it is essential that there be only an escape for air or water afforded through the nozzle 22.

The upper cylindric section 14 is attached to the washboard at its upper end by a rocking connection, preferably like the connection of the lower section with the cross-bar 10^a, consisting of the ring 23, which is secured on the section 14 and is pivoted between the prongs of the yoke 24, the latter having a screw-bolted connection with the upper cross-bar of the washboard, as is clearly shown in Fig. 2.

It will be seen that in effect the cylindric sections 13 14 produce a pump for the elevation of water from the washtub and discharge of the same over the rubbing-surface of the washboard or any article placed on the latter.

If the device is located in a tub or other receptacle containing water, and the operator assumes a position at the tub near the elevated end of the washboard to rub clothes or other soiled goods thereon for the renovation of such material, the act of pressing down and reciprocating the goods on the washboard in the usual way will correspondingly depress the upper section 14 of the pumping device, and a few strokes of the pump produced by work at the washboard will exhaust the air from the lower section 13 and effect an elevation of water, a continuation of the operation forcing the suds-water in a thin stream from the nozzle 22.

It is obvious that the adjustment of the spring-arm 12 on the rack 13 will give any desired range of stroke for the pump, the upstroke of the latter being produced by the arm assuming its normal shape after depression.

It is claimed for the improved hydraulic attachment that the work of washing or rubbing soiled articles to clean them with suds-water is expedited, as the water is constantly thrown on the goods while undergoing renovation.

The yielding action of the spring-arm 12 restricts the application of excessive force on the goods and thus prevents injurious wear thereon, and as the degree of pressure can be gaged by an adjustment of the arm on the rack 13 a proper pressure on different kinds of material that is being rubbed on the board can be readily obtained. If considered of advantage the articles that have been rubbed with soapy water to eliminate dirt and stains may be rinsed and rubbed at the same time with a supply of clean water that is introduced in the washtub after the dirty suds have been removed, which operation will thoroughly rinse the suds from the goods and whiten the same effectively.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a pumping device, of a washboard having one end pivoted and its other end yieldingly supported and secured to the pumping device to operate it, whereby the pumping device will be operated to discharge water on the board by the reciprocating motion imparted to the board in the act of rubbing the goods thereon, substantially as described.

2. An apparatus for the renovation of fibrous material, comprising a frame, a washboard pivoted at one end on said frame, a spring support for the washboard, and a water pumping device connected to the frame and washboard, and adapted to receive motion from the rocking movement of said washboard as the said board is rocked, substantially as described.

3. The combination with a washboard having one end pivoted and its other end yieldingly supported, of a pumping device, consisting of two telescoping cylindrical sections, each section having a diaphragm provided with a valve, the upper section being secured to the upper end of the washboard and provided with a nozzle projecting over the said board, substantially as described.

4. The combination with a washboard having one end pivoted and its other end yieldingly supported, of a pumping device, consisting of two telescoping cylindrical sections, each having a diaphragm provided with a valve, the lower section having rocking connection with a fixed support and the upper section a rocking connection with the upper end of the washboard and provided with a nozzle projecting over the said board, substantially as described.

5. The combination with a fixed frame, of a washboard having one end pivoted to the frame, a rack carried by the said frame, a spring having one end secured to the washboard and its other end engaging the rack, and a pumping device connected with the upper end of the washboard and adapted to be operated by the rocking movement of said board, substantially as herein shown and described.

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