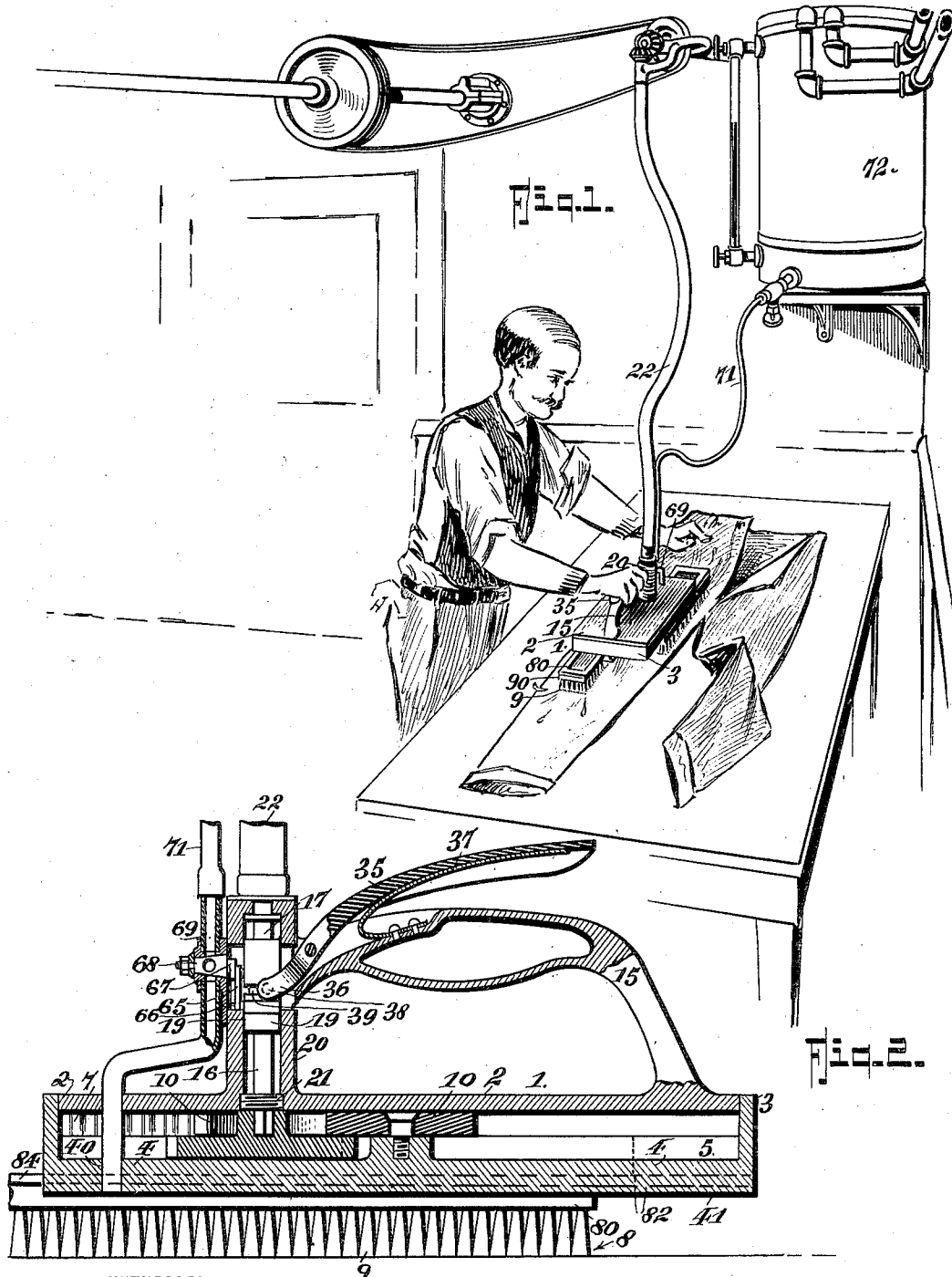


A. W. FIETZ.  
 SCRUBBING APPARATUS.  
 APPLICATION FILED MAR. 9, 1912.

1,038,548.

Patented Sept. 17, 1912.

2 SHEETS—SHEET 1.



WITNESSES:

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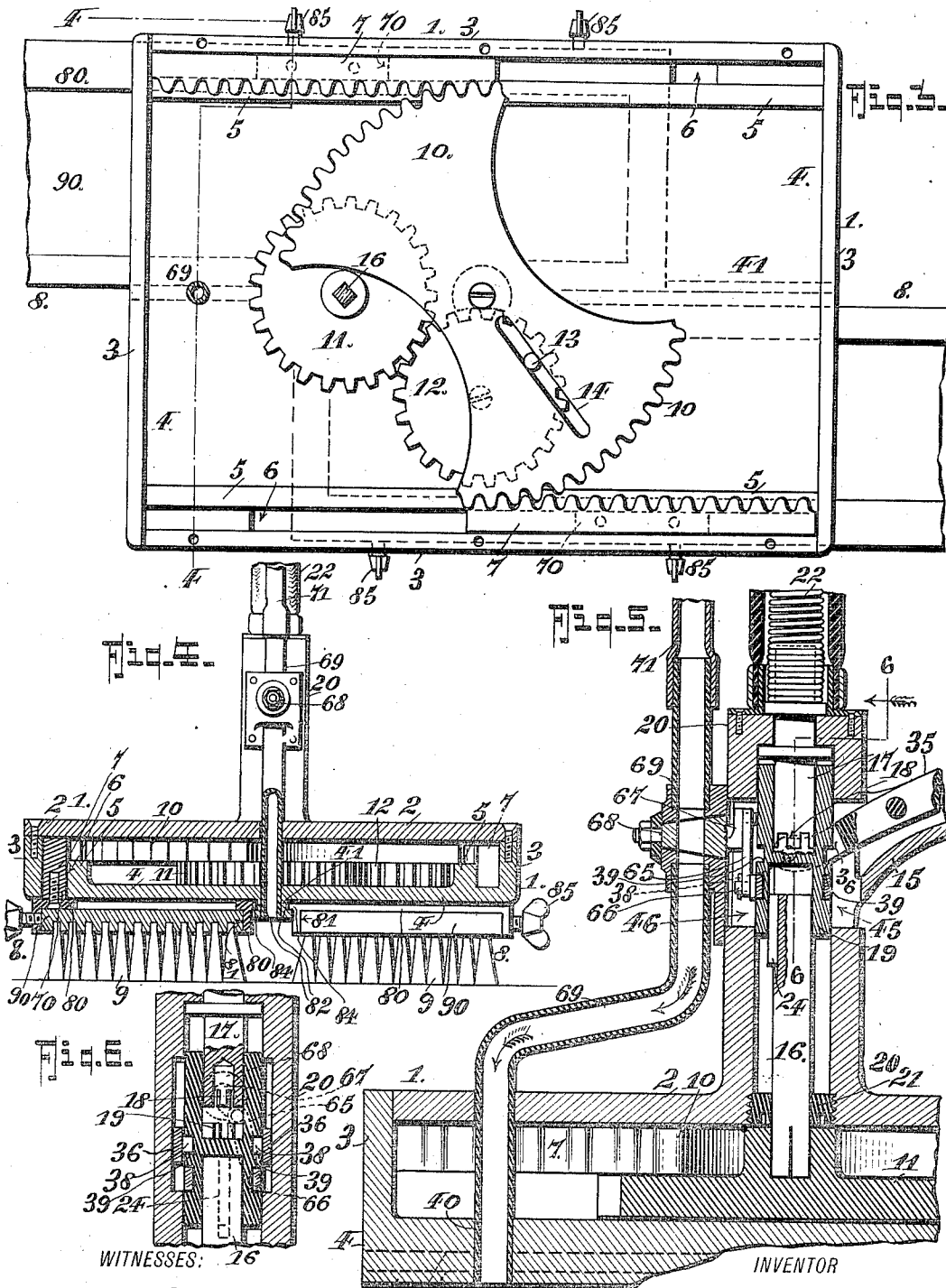
BY  
 Fred G. Dietrich & Co.  
 ATTORNEYS

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# UNITED STATES PATENT OFFICE.

ADOLF W. FIETZ, OF MARTINS FERRY, OHIO.

## SCRUBBING APPARATUS.

1,038,548.

Specification of Letters Patent.

Patented Sept. 17, 1912.

Application filed March 9, 1912. Serial No. 682,635.

*To all whom it may concern:*

Be it known that I, ADOLF W. FIETZ, residing at Martins Ferry, in the county of Belmont and State of Ohio, have invented a new and Improved Scrubbing Apparatus, of which the following is a specification.

This invention, which relates to scouring and cleaning means, is more particularly designed for use in dyeing and cleaning establishments, and it primarily has for its object to provide a scouring or cleansing appliance which includes an improved arrangement of power operated brushes and means for constantly feeding the scouring solution thereto during the operation of brushing and cleaning.

With other objects in view that will hereinafter appear, this invention, in its generic nature, embodies a carrier, a brush reciprocally mounted on the carrier and an improved means for feeding the scouring solution to the brushes.

In its more complete nature, this invention embodies, in connection with the brushing, the fluid feeding and the carrier devices, hand controlled mechanism for throwing out of operation the brush driving and the fluid feeding means.

In its more subordinate feature, this invention consists in certain details of construction and novel arrangement of parts, all of which will be hereinafter fully explained, specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which:

Figure 1, is a perspective view that illustrates my invention as applied for use. Fig. 2, is a vertical longitudinal section thereof, the parts being at their normal or inoperating position. Fig. 3, is a plan view thereof, the top member of the carrier being removed. Fig. 4, is a vertical cross section thereof taken on the line 4—4 on Fig. 3. Fig. 5, is an enlarged detail section of the combined power shaft clutch and liquid feed cut off, the supplemental handle member being depressed, the fluid controlling valve open and the aforesaid clutch positioned for imparting motion to brushes operating gears. Fig. 6, is a detail cross section taken on the line 6—6 on Fig. 5, the clutch devices being shown disengaged.

My invention while useful for various purposes is more especially adapted for use in dyeing and cleaning establishments, and

while it is hand manipulated, so far as holding the same to the work and controlling the motion of the cleaner brushes and the scouring fluid feed, the brushes or cleaning devices are power-driven by means of a flexible drive in the manner clearly shown in Fig. 1.

In its structural arrangement, my invention comprises a carrier 1, in the nature of a shallow rectangular shaped box and the top 2 of which is removably mounted on the sides 3 of the box, the bottom 4 of which has a fluid pipe opening 40. At the opposite sides, the bottom has integral flanges that form guides 5, and for some distance between the guides and the side walls 3, the bottom has longitudinal slots 6.

7—7 designate oppositely disposed rack bars, the rack faces of which extend over and ride upon the guides 5 and the shanks 70—70 of which extend down through and are slidable in the slots 6, as is shown in Figs. 2 and 4. Cooperating with each rack bar 7 is a brush or scouring element 8, that consists of a rectangular frame 80 having a receptacle 81 for receiving the head 90 of the brush 9. The frames 80 are fastened at their outer edge to the under side of the shanks 70 of the bars 7 and they have their inner edges formed with flanges 84 for riding in grooved guides 82 in a central pendant member 41 on the carrier bottom 4, see Fig. 4. The brushes being taken from common stock, need only be inserted in the receptacles 81, the thumb screw 85 tightened and the device is ready for use.

10 designates a horizontally rockable double segment gear, the opposite faces of which mesh with the racks 7, it being understood that the oscillatory motion of the gear 10 imparts alternate reciprocating motion to the rack bars 7, and in consequence the brushes move in rectilinear relation, and in alternate direction, as the carrier is guided over and held down against the garment being cleaned, as indicated in Fig. 1. For imparting motion to the gear 10, a drive gear 11 and an intermediate gear 12 in mesh with the gear 11 are provided, and the gear 12 is equipped with a wrist or crank pin 13 that extends up into and plays in a longitudinal slot 14 in the gear 10.

15 designates a handle integral with or fixedly connected to the top 2 for manipulating the apparatus.

Referring now more particularly to Figs. 4, 5 and 6 of the drawings, it will be noticed the driving gear 11 is mounted on a shaft section 16 that extends up into the tubular vertical extension 20 of the top 2, the lower end of which is closed by a detachable plug 21 apertured for the passage of the shaft 16. 17 designates another shaft section journaled in the upper end of the extension 20, the upper end of which connects with the flexible drive 22, driven in the usual manner, see Fig. 1. The lower end of the shaft 17 terminates in a clutch 18 for coöperating with a slidable clutch member 19 that has a feather and spline connection 24 with the shaft 16, the several parts being so arranged that when the sliding clutch 19 is moved upwardly the two shaft sections 16 and 17 will be joined and the power from the flexible drive is transmitted to the gear 11, and in consequence oscillatory movement is imparted to the double segment which transmits the reverse reciprocable movement to the brushes. When the clutch 19 is moved downwardly, the connection between the shaft members 16 and 17 is broken and no motion is transmitted from the flexible drive to the brushes. On the handle 15 is mounted a lever 35 normally moved so its inner end 36 is depressed by a spring 37. The inner end of the lever is bifurcated so as to straddle the sliding clutch 19, it having studs 38 for engaging an annular groove 39 in the same clutch 19, as is best shown in Fig. 2, from which it is clear that under normal conditions the clutch 19 is down and disengaged from the shaft sections 17. It will also be noticed in the said Fig. 2 and Fig. 5, the extension 20 has an elongated slot 45 at one side for the passage of the lever end 36, and a like slot 46 at the opposite side in which moves a link 65 pivoted at its lower end to a stud 66 on the sliding clutch 19 and pivotally joined at the crank 67 of a rotary valve 68 mounted in the feed pipe 69 that discharges through the carrier top and connects with a flexible pipe section 71 connected with an overhead reservoir 72 that contains the scouring fluid, such arrangement of parts providing for simultaneously cutting out the scouring fluid feed when the brushes are disconnected from the flexible drive and to open the fluid feed when the said brushes are being operated by the said flexible drive.

From the foregoing description taken with the drawings, the complete arrangement, the manner in which the apparatus is operated and its advantages will be apparent to those skilled in the art to which my invention relates. Since the brushes are power-driven much quicker and better work is accomplished than by the usual hand scrubbing means, and since the soap and water is automatically fed to the brushes

the operator's hands are not water soaked, as is usual. Furthermore so soon as the operator lets go the brush carrier for assembling or arranging the garment being scrubbed, the feed of the scouring agent and the motion to the brushes is instantly cut out; it being obvious that in picking up the carrier the operator in squeezing the handle lever connects the brushes with the power devices and opens the valve in the fluid feed.

While the details described and shown, set out a convenient structure, it is apparent they may be readily modified or varied without departing from the invention or the scope of the appended claims.

What I claim is:

1. A brushing and scrubbing tool, comprising a carrier movable over the article being scrubbed, a brush mounted on and reciprocally movable on the carrier, a continuous driving means including a clutch device for actuating the brush as it is moved over the work, and another means for feeding a scouring fluid to the brush as the brush is moved over the work, a valve for controlling said fluid feed, and a single device for operating both said valve and said clutch.

2. An apparatus of the character described, comprising a carrier movable over the article being scrubbed, a brush mounted and reciprocally movable on the carrier, a continuous driving means for actuating the brush as it is moved over the work, another means for feeding a scouring fluid to the brush as the brush is moved over the work, the said other means including a delivery pipe that connects with the carrier and is movable therewith, and further means including a single operating device on the carrier for cutting out the driving means and the fluid feed.

3. A scouring and cleaning means comprising a carrier movable over the article worked upon, power operated brushes reciprocally mounted on the carrier, and means separate from the power mechanism for constantly feeding a scouring solution thereto during the operation of brushing and cleaning together with a single controlling device for simultaneously controlling the operation of the brushes and of the scouring solution feeding means.

4. A scouring and cleaning means comprising a carrier having a handle for moving it over the article being operated on, brushes reciprocally mounted on the carrier, means for operating the brushes, said means including a clutch for controlling the transmission of the power to the brushes, a means for constantly feeding the scouring solution to the brushes, said feeding means including a valved delivery pipe mounted on the carrier and a lever on the handle connected with the clutch and the valve in said pipe for shifting the clutch to release the

brushes from the power and simultaneously close the valve in the delivery pipe to cut off the scouring solution feed.

5 A scouring and cleaning means of the character stated, comprising a carrier having a handle for moving it over the article being worked upon, brushing and fluid feeding devices on the carrier and movable therewith, power mechanism for imparting  
10 movement to the brushes independent of the carrier movement and hand controlled mechanism on the carrier for throwing out of operation the power mechanism and the fluid feeding devices, said fluid feeding de-  
15 vices being separate from the power mechanism.

6. A scouring and cleaning means of the character stated comprising a carrier having a handle for moving it over the article being  
20 worked upon, brushing and fluid feeding devices on the carrier and movable therewith, mechanism for imparting movement to the brushes independent of the carrier movement, hand controlled mechanism on the  
25 carrier for throwing out of operation the power mechanism and the fluid feeding devices, said hand controlled mechanism including a rotary valve in the fluid feeding

devices, a shifting clutch in the power mechanism, a spring pressed lever device 30 that simultaneously shifts the clutch and the valve in one direction, and under manual manipulation simultaneously shifts the clutch and the valve in the opposite direction. 35

7. A scouring and cleaning means comprising a carrier movable over the article worked upon, brushes reciprocally mounted on said carrier, mechanically actuated power mechanism for operating said brushes, controlling means for said power mechanism, means separate from said power mechanism for constantly feeding a scouring solution to the work during the operation of brushing and cleaning, and a controlling means sep- 45 arate from said power mechanism for controlling the operation of said scouring solution feeding means, and a single device for operating said power controlling means and said controlling means for said solution 50 feeding means.

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Witnesses:

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R. T. ONG.