

Jan. 31, 1928.

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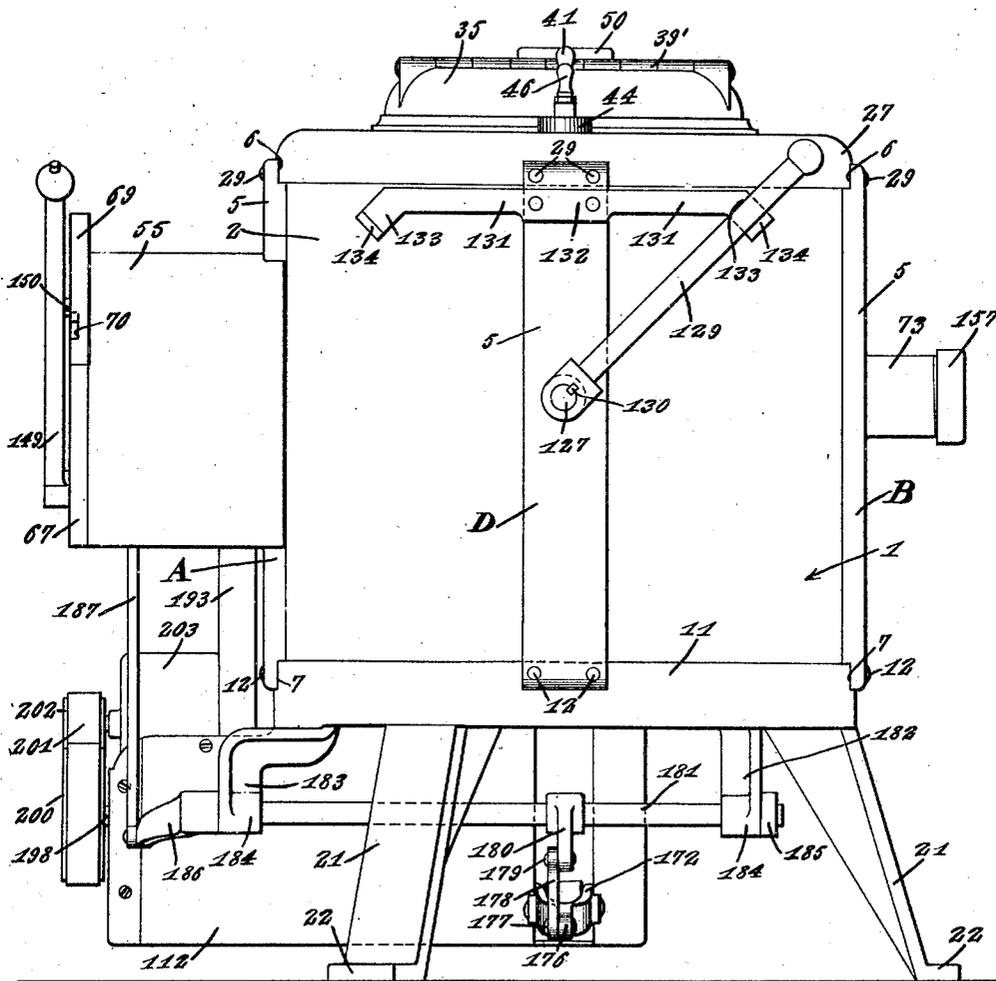
S. M. GORN

COMBINED WASHING AND EXTRACTING DEVICE

Filed Sept. 1, 1926

6 Sheets-Sheet 1

*Fig. 1.*



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Jan. 31, 1928.

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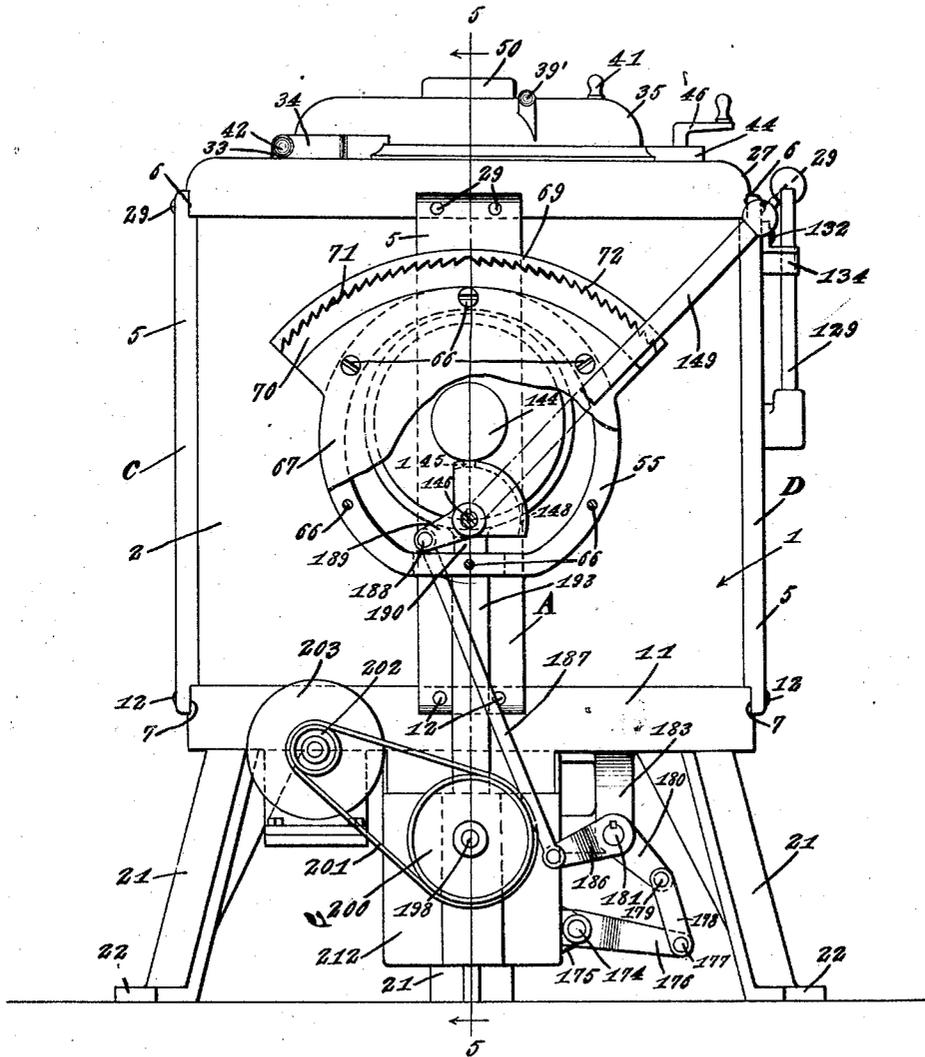
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COMBINED WASHING AND EXTRACTING DEVICE

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6 Sheets-Sheet 2

*Fig. 2.*



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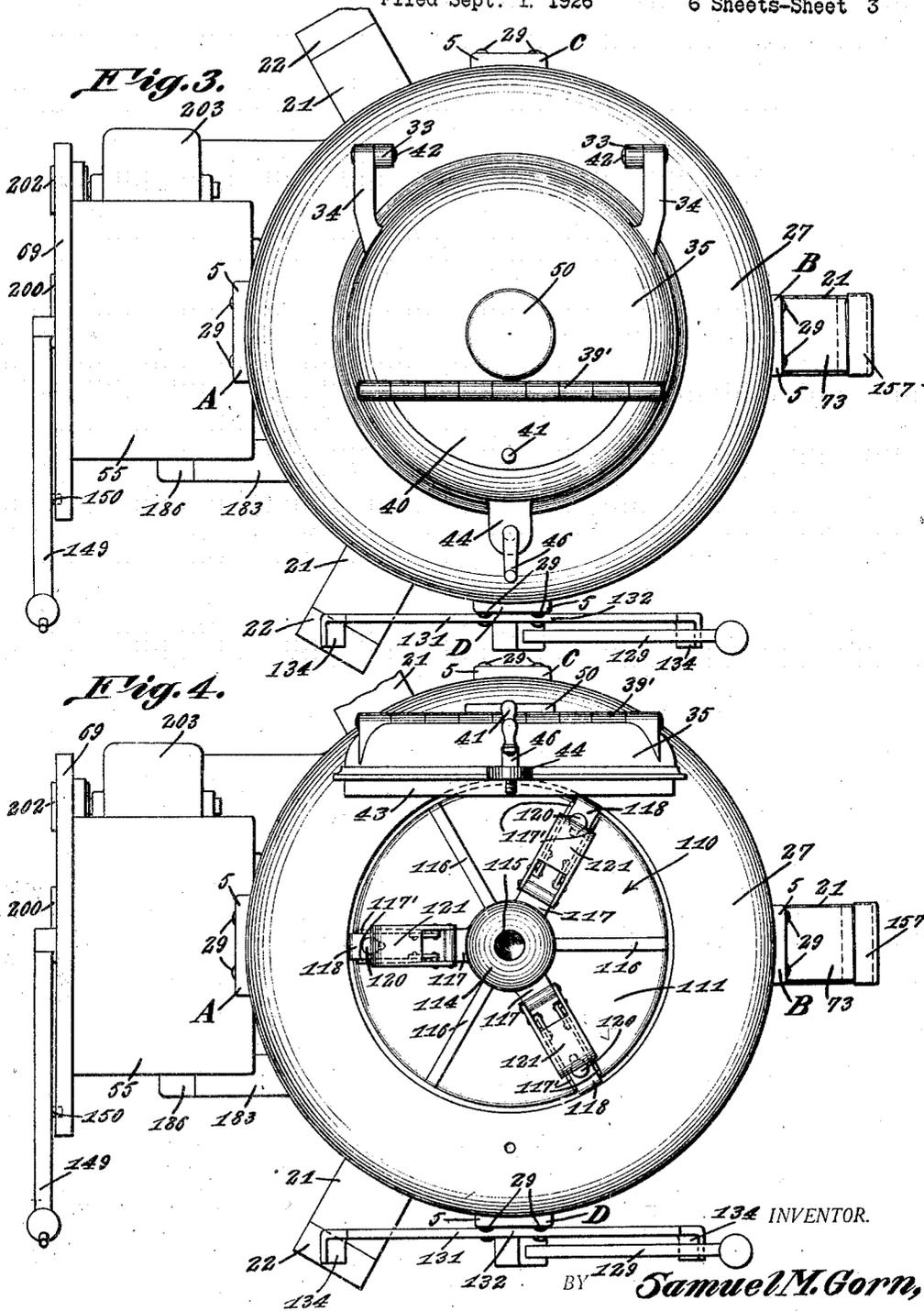
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COMBINED WASHING AND EXTRACTING DEVICE

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Jan. 31, 1928.

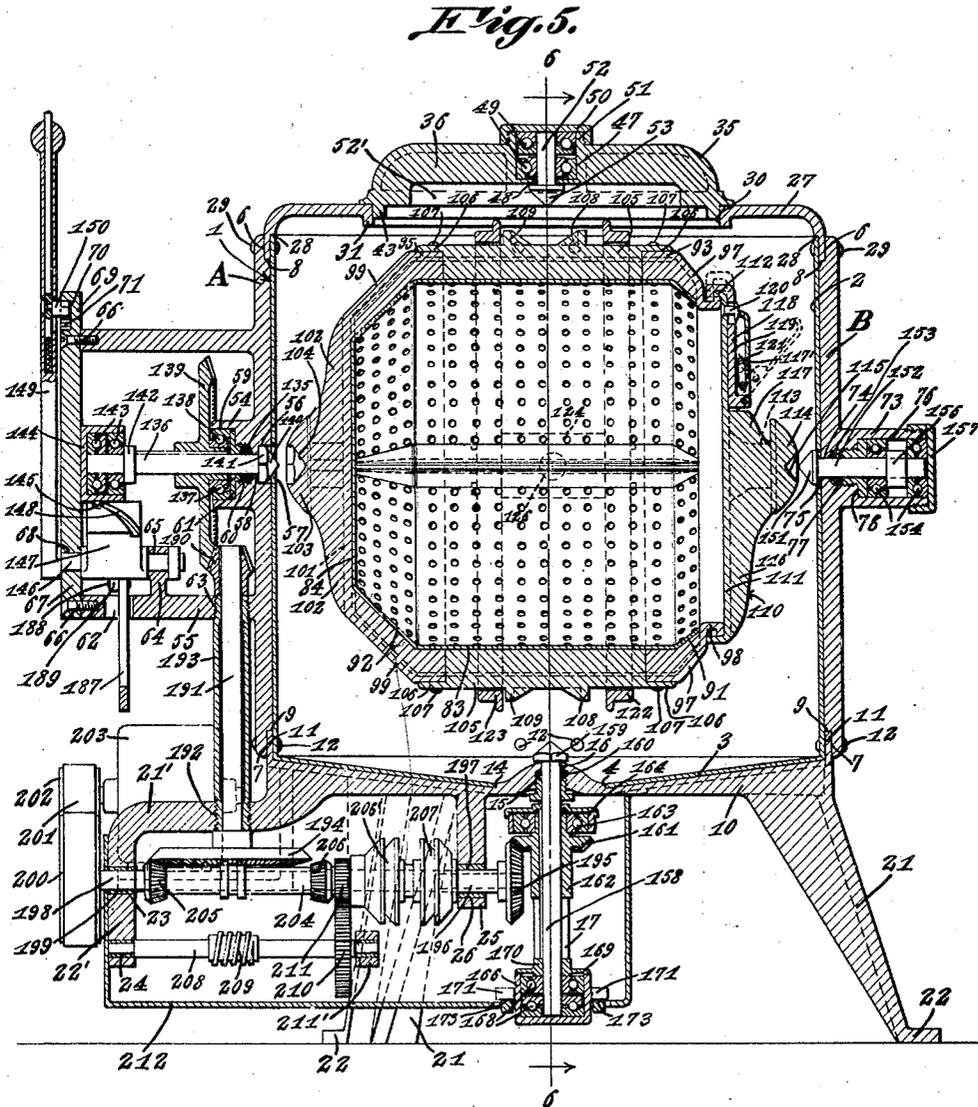
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COMBINED WASHING AND EXTRACTING DEVICE

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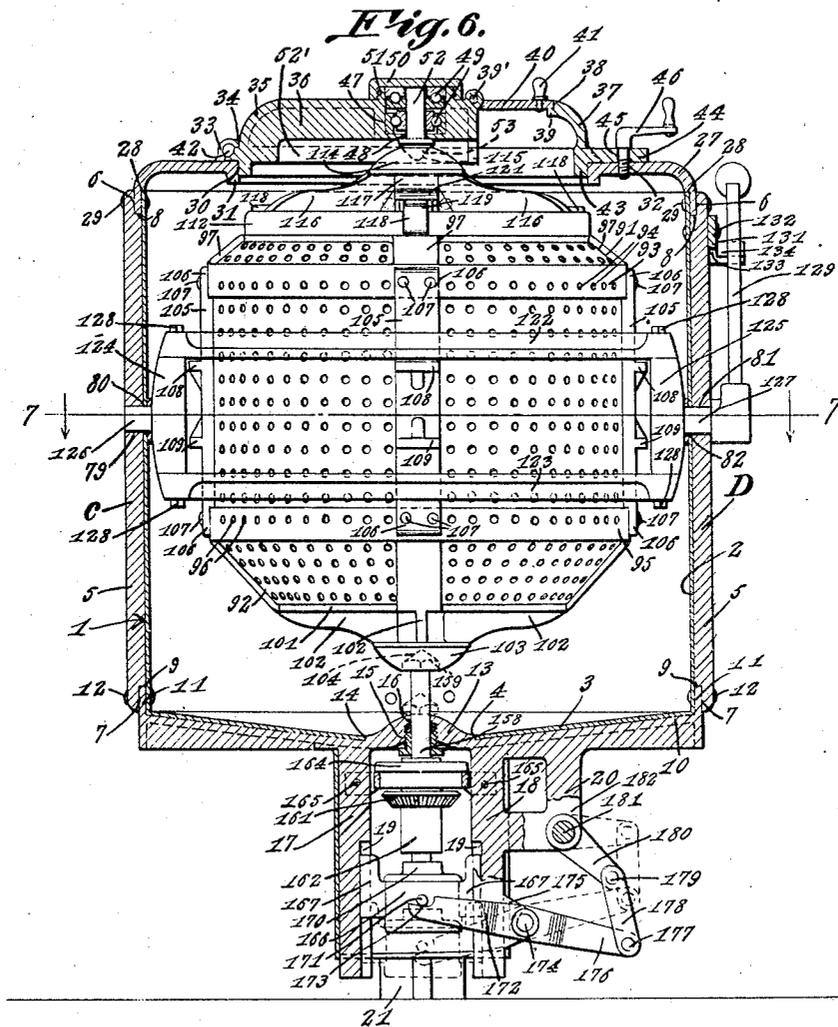
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COMBINED WASHING AND EXTRACTING DEVICE

Filed Sept. 1. 1926

6 Sheets-Sheet 5



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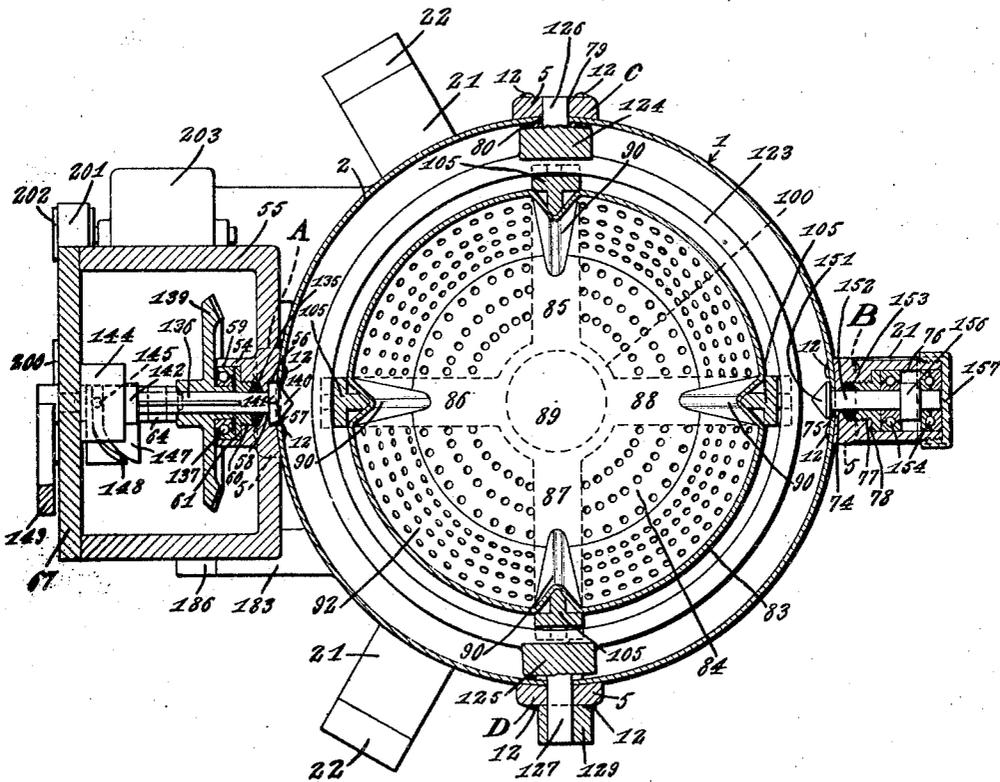
S. M. GORN

COMBINED WASHING AND EXTRACTING DEVICE

Filed Sept. 1, 1926

6 Sheets-Sheet 6

Fig. 7.



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# UNITED STATES PATENT OFFICE.

SAMUEL M. GORN, OF SAN ANTONIO, TEXAS.

COMBINED WASHING AND EXTRACTING DEVICE.

Application filed September 1, 1926. Serial No. 133,001.

This invention relates to a combined wash-  
er and extracting apparatus, and has for its  
object to provide, in a manner as hereinafter  
set forth, an apparatus of such class for  
washing and drying clothes, cloth and other  
textile fabrics, spun or unspun fibers, goods  
or other materials, with only one handling  
of the goods or material operated on.

Further objects of the invention are to  
provide, in a manner as hereinafter set forth,  
an apparatus of the class referred to which  
is strong, durable, compact, thoroughly effi-  
cient in its use and conveniently operated.

With the foregoing and other objects in  
view, the invention consists of the novel con-  
struction, combination and arrangement of  
parts as hereinafter more specifically de-  
scribed and illustrated in the accompanying  
drawings, wherein is shown an embodiment  
of the invention, but it is to be understood  
that changes, variations and modifications  
can be resorted to which fall within the scope  
of the claims hereunto appended.

In the drawings wherein like reference  
characters denote corresponding parts  
throughout the several views:

Figure 1 is an elevation of a combined  
washing and extracting apparatus in accord-  
ance with this invention looking towards  
the front thereof.

Figure 2 is a view similar to Figure 1  
looking towards one side thereof.

Figure 3 is a top plan view of the appa-  
ratus when closed.

Figure 4 is a top plan view of the appa-  
ratus when open.

Figure 5 is a section on line 5—5, Fig-  
ure 2.

Figure 6 is a section on line 6—6, Figure 5.

Figure 7 is a section on line 7—7, Figure 6.

A combined washing and extracting ap-  
paratus, in accordance with this invention,  
comprises a supporting structure for a per-  
forated receptacle or basket and a driving  
and holding means for the latter. The re-  
ceptacle or basket is mounted in the support-  
ing structure, which is in the form of a tank  
and adapted to contain the washing or dye-  
ing liquid. The receptacle or basket, when  
the washing step is carried on, is disposed  
in a horizontal position within the tank and  
revolves, and when the drying or extracting  
step is carried on, the receptacle or basket is  
shifted from a horizontal to a vertical posi-

tion and revolves in such position, so that  
the contents of the receptacle or basket will  
be dried by centrifugal force and air circula-  
tion. The use of the terms "horizontal" and  
"vertical" shall be construed to mean wash-  
ing and drying positions respectively.

The tank, referred to generally by the  
reference character 1, comprises a cylindrical  
body portion 2 which is preferably construct-  
ed of sheet metal and at its lower end is  
formed with an inwardly extending contin-  
uous downwardly inclined extension 3 con-  
structed to provide an opening 4 at the center  
of the tank. Secured to the outer face of the  
body portion 2, at equi-distant points, are  
vertically disposed reinforcing members 5  
of a length to extend from the lower ter-  
minus of the body portion 2 to the upper end  
thereof. The inner face of each member 5,  
at the top and bottom thereof are mortised  
at 6, 7 respectively to provide the shoulders  
8, 9 respectively. The extension 3 forms a  
lining for the major portion of the upper  
face of the flanged bottom 10 of the tank.  
The flange 11 of the bottom 10 is position-  
ed in the mortises 7. The body portion 2 is  
secured to the flange 11 and members 5 by  
hold fast devices 12.

The inner face of the bottom 10, centrally  
thereof, is provided with an upstanding por-  
tion 13 of arcuate cross section. The por-  
tion 13 provides a shoulder 14 against which  
abuts the extension 3, see Figure 6. The  
upper face of the bottom 10 from its flange  
11 to the opening 4 depends downwardly at  
an inclination and is snugly engaged by the  
extension 3. The bottom 10, centrally there-  
of is provided with a pocket 15 opening at  
its lower face and of a height to extend into  
the upstanding portion 13. The upper end  
of the pocket 15 communicates with an open-  
ing 16 arranged centrally of the upstanding  
portion 13. The wall of the pocket is  
threaded.

Formed integral with the lower face of  
the bottom 10, is a pair of spaced opposed  
hangers 17, 18, each having its inner face  
formed with a vertically disposed groove  
19 extending from the end of its respective  
hanger and terminates at a point removed  
from the upper end thereof. Formed inte-  
gral with the bottom 10 and with the hanger  
18 is an angle-shaped arm 20. Formed inte-  
gral with the bottom 10 is a series of sup-

porting legs 21 for the tank. The legs 21 are formed with foot pieces 22. Extended from the bottom 10, as well as being formed integral therewith, is a laterally disposed hanger arm 21' provided at its outer portion with a vertically disposed depending part 22' formed with a pair of openings 23, 24. Formed integral with the bottom 10 and opposing the part 22' as well as spaced inwardly a substantial distance therefrom is a hanger arm 25, provided with an opening 26.

Secured to the members 5 and body portion 2 is the top 27 for the tank 1 and which is of inverted cup-shape and projects a substantial distance above the upper end of the body portion 2. The top 27 is positioned in the mortises 6 and is shouldered as at 28 for seating on the top edge of the body portion 2. The top 27 is fixedly secured in position by hold fast devices 29. The top is formed with an enlarged concentric opening 30 and with a depending annular flange 31 forming a continuation of the wall of the opening 30. An opening 32 is also formed in the top 27.

Formed integral with the top 27, at the rear thereof is a pair of upstanding apertured lugs 33 arranged between and abutting a pair of rearwardly extending arms 34 integral with a cover element 35 employed to close the opening 30. The cover element consists of a thick portion 36 and a thin portion 37. The thickened portion 36 is of greater area than the thin portion 37, and the latter is provided with an opening 38 and a ledge 39 which extends inwardly from the bottom of the edge of the opening 38. Pivotaly connected to the portion 36, at the inner side thereof, as at 39' is a cover member 40 for the opening 38 and which has a handle piece 41. When the member 40 is in closed position with respect to the opening 38 it seats on the ledge 39. The cover member 40 provided means for viewing the interior of the tank, or obtaining access to the interior of the tank, without swinging the cover element 35 bodily to open position.

The cover element 35 is of a diameter to seat on the top 27 adjacent the opening 30. The arms 34 are pivotaly connected, as at 42 to the lugs 33 whereby the cover element 35 is hinged to the top 27. The cover element 35 is formed with a depending annular flange 43 which extends into the opening 30 when the cover element 35 is in closed position with respect to the tank 1. The cover element 35 at the front has a lug 44 which seats on the top 27 and is formed with an opening 45 adapted to register with the opening 32. Extending through the opening 45 and having threaded engagement with the wall of the opening 32 is a latching member 46 for the purpose of securing

the cover element 35 in closed position with respect to the tank 1.

The portion 36 of the cover element 35 is provided with a pocket 47, positioned centrally of said cover element 35 and the bottom of said pocket 47 communicates with an opening 48 formed in the portion 36 of the cover element 35. Arranged within the pocket 47 is a plurality of superposed annular bearing elements 49 retained in position by a cap piece 50 provided with interior threads for engagement with a peripherally threaded annular flange 51 integral with the top of the portion 36 of the cover element 35. The lower face of the thickened portions 36 of the cover element 35 is cut away as at 52' to provide a clearance for one end of the receptacle or basket to be hereinafter more fully referred to. Extending through the opening 48 and surrounded by the bearing elements 49 is a shaft 52 having its lower end provided with a conoidal shaped head 53 arranged exteriorly of the opening 48 and within the clearance 52'. The shaft 52 in connection with the head 53 provides what may be termed a combined bearing and holder element for the receptacle or basket, or a centering shaft for the latter.

That vertically disposed reinforcing member 5, which is indicated at A is formed with a pair of concentrically arranged, laterally disposed tubular extensions 54, 55 and with the latter of materially greater diameter and length than the former. The reinforcing member A is provided with a pocket 56 communicating with an opening 57 formed in the body portion 2. The member A is furthermore provided with an opening 58 which communicates with the pocket 56. The tubular extension 54 is set up with two portions of different inner diameters and with the portion of greatest diameter arranged outwardly with respect to the portion of smaller inner diameter. The portion of greatest inner diameter is indicated at 59 and the portion of smallest inner diameter is indicated at 60. Providing the tubular member 54 with two portions of different inner diameters forms a shoulder 61. The inner face of the tubular extension 54 at the portion of smallest inner diameter thereof is threaded. The tubular extensions 55 at the bottom thereof is formed with a slot 62 and an opening 63 having a threaded wall. The slot 62 is arranged outwardly with respect to the openings 63 and between said slot 62 and opening 63, the inner face of the extension 55 is formed with an upwardly extending arm 64 provided with an opening 65. The outer end of extension 55 has secured therewith by the hold-fast devices 66, a closure plate 67 which is formed with an opening 68 in the lower portion thereof. The plate 68, at its top, has in-

tegral therewith a segmental extension 69 having a lengthwise extending arcuate groove 70 with its top wall formed with two oppositely disposed sets of teeth 71, 72.

5 The function of the teeth 71 and 72 will be presently referred to.

That reinforcing member 5, indicated at B, is formed with a laterally extending tubular extension 73 diametrically opposed with respect to the tubular extension 54. The reinforcing member B is formed with an opening 74, which registers with an opening 75 formed in the body portion 2 and said opening 75 is diametrically opposed with respect to the opening 57. The tubular extension 73 is set up with two portions of different inner diameters and that portion of greatest inner diameter is indicated at 76 and the other portion at 77. The portion 77 of smallest inner diameter has the wall thereof threaded and which communicates with the opening 74. The setting up of the extension 73 of two different inner diameters provide a shoulder 78.

25 That reinforcing member 5, indicated at C, is provided with an opening 79 which registers with an opening 80 formed in the body portion 2. That reinforcing member 5 indicated at D, is formed with an opening 81 arranged diametrically opposite the opening 79 and said opening 81 registers with an opening 82 formed in the body portion 2.

35 The receptacle or basket is arranged within the tank 1 and comprises a perforated container 83 having a closed perforated end 84 and an open end. The container 83 is formed from sheet metal of the desired gage and has one end terminal portion thereof tapered and formed with a perforated end 84. The other end terminal portion of the container is also tapered, but it is arranged at the open end thereof. The container is set up with non-perforated portions 85, 86, 87 and 88 and the end 84 centrally with a non-perforated portion 89. The non-perforated portions 85 to 88 extend from the portion 89 to the open end of the container. The non-perforated portions 85 to 88 from the open end of the container to the end 84 are inset as at 90 to form pounders or agitators 90 and each of which is V-shape in cross section. The tapered portions of the container are indicated at 91, 92 and surrounding the container adjacent the tapered portion 91 is a collar 93 apertured as at 94 to align with the apertures in the container 83. Surrounding the container 83 adjacent the tapered portion 92, thereof is a collar 95, provided with apertures 96 registering with the apertures in the container. Formed integral with the collar 93 is a series of spaced arms 97 which overlap the tapered portion 91 and terminate in a ring 98 which is of channel shape in cross

section and with the channel thereof opening outwardly. The function of the channel shaped ring 98 will be presently referred to. Formed integral with the collar 95 and overlapping the tapered portion 92 of the container 83 is a series of arms 99 which terminate in a disk 100 as indicated in dotted lines in Figure 7. Each of the arms 99 is of angle shape and has a portion 101 which is positioned against the end 84 of the container. The portions 101 of the arms 99 are provided with integral webs 102. Formed integral with the webs 102, at the center thereof, is a centering head 103 having a pocket 104 with its inner portion of conoidal contour and its other portion of polygonal contour.

Secured to the outer face of the container 83, is a series of reinforcing bars 105, arranged equi-distant with respect to each other, positioned between the collars 93 and 95, abutting against the container 83 and has each end formed with an extension 106 which overlaps the collar 93 or 95. The extensions 106 are secured to the collars 93 and 95 by the hold-fast devices 107. Each of said bars at a point between its transverse median and each end is formed with a transversely extending lateral reinforced lug, indicated at 108 and 109 forming stops arranged nearer to the transverse medians of the bars than the ends thereof. The lugs 108 and 109 further coact with a shifting device for tilting the receptacle or basket from vertical to horizontal position or conversely. The shifting device acting against the lugs 109 will tilt the receptacle or basket element from vertical to horizontal, and when acting against the lug 108 will tilt it from horizontal to vertical. The lugs 108 are equally spaced with respect to each other and the lugs 109 are arranged in the same manner. The lugs 108 are arranged approximately ninety degrees apart and the same arrangement is had with respect to the lugs 109 so that the shifting device will bear at four points with respect to the receptacle or basket when shifting the same from vertical to horizontal or conversely.

115 The receptacle or basket further includes a removable closure for the open end of the container 83 and said closure is provided with a centering head and means coacting with the channel ring 98 for locking the closure in position with respect to the open end of the container 83. The closure which is referred to generally by the reference character 110 consists of a circular plate 111 which seats against the ring 98 and is formed with an annular flange 112 which surrounds the ring 98 when the closure 110 is secured in position to close the open end of the container 83. The flange 112 extends from the disk 111 in a direction toward the container 83. Formed integral with the outer

face of the plate 111, centrally thereof, is a shank 113 which terminates in a centering head 114 provided with a conoidal shaped pocket 115. Formed integral with the outer face of the plate 111 is a series of reinforcing webs 116 which extend from the outer edge of the plate 111 and terminate in the shank 113. Reinforcing webs 117 of less length than the webs 116 are formed integral with the plate 111 and the shank 113. The outer face of the plate 111 is formed with a plurality of pairs of guides 117' and between each pair of guides is arranged a locking device 118 for securing the cover element 110 in closed position. Each locking device consists of a sliding bolt 119 having its outer end constructed to extend through an aperture in the flange 112 and engage in the channel of the ring 98, see Figure 5. A pin and slot connection is arranged between each locking bolt 119 and the disk 111 as indicated at 120. A lever arm 121 is pivotally connected with the bolt 119 in a manner whereby when the arm 121 is elevated the locking bolt 119 will be shifted clear of the flange 112 and ring 98, but when the lever arm 121 is lowered, see Figure 5, the locking bolt will be shifted inwardly so as to set up a locking engagement between the closure element and the channel ring 98.

The shifting device, which coacts with the lugs 108 and 109, for the purpose of tilting the receptacle or basket from vertical to horizontal or conversely, comprises a pair of spaced bands 122 and 123 the former associates with the lugs 108 and the latter with the lugs 109. The bands 122 and 123 are connected together at diametrically opposite points by a pair of coupling members 124 and 125. The member 124 is formed with a laterally disposed stub shaft 126 which extends into the opening 75 of the reinforcing member. The coupling member 125 is provided with a laterally disposed stub shaft 127 which extends into the opening 81 of the reinforcing member D. The stub shafts 126 and 127 provide pivots for the shifting device. The bands 122 and 123 are positioned a sufficient distance apart, to permit of the shifting of the receptacle or basket, a band engages with either set of lugs and also to permit of the receptacle assuming a position so that the coacting centering heads thereof will be arranged in relation to provide for the revolving of the receptacle when desired. The coupling members 124 and 125 are secured to the bands 122 and 123 by the hold fast devices 128. The shifting device further includes a shifting lever therefor which is indicated at 129, and is connected as at 130, to the stub shaft 127. A stop member 131 is secured to the upper end of that reinforcing member D and is provided for limiting the shifting movement of the lever 129 in either

direction. The stop member 131 is shown in Figure 1 and consists of an elongated bar 132 provided at each end with depending angularly disposed portions 133 formed with transversely extending inclined stops 134.

Referring to Figure 5, the tubular member 54, at that part of smallest diameter, is provided with a packing 135 for a laterally disposed drive shaft 136. The packing 135 is secured in position by a gland 137. A bearing element 138 is mounted in that portion of the extension 54 of greatest inner diameter. The shaft 136 carries a beveled gear 139 and has its inner end formed with a head provided with a conoidal shaped portion 140 and a polygonal shaped portion 141. The polygonal shaped portion 141 coacts with the polygonal shaped portion of the pocket 104 for the purpose of driving in a horizontal direction the receptacle or basket. Normally the head at the inner end of the shaft 136 is positioned in the pocket 56 and extends into the opening 57. The shaft 136 is furthermore provided with a collar 142 arranged at a point removed from the outer end thereof and mounted on the shaft 136 and abutting against the collar 142 are bearing elements 143. A container 144 is provided for housing the bearing elements 143, and said container is formed with a peripheral stud 145 for a purpose to be presently referred to. Extending through the opening 68 and further mounted in the opening 65 is a cam shaft 146, having a cam 147 formed with a cam groove 148 in which travels the stud 145 formed on the periphery of the container 144. Fixedly secured to the outer end of the shaft 146 is a rocking lever 149 therefor which carries a spring controlled dog 150 coacting with the sets of teeth 71 and 72 for the purpose of maintaining or locking the lever 149 in the position in which it has been shifted. When the lever 149 is shifted to the left, the stud or pin 145 travelling in the cam groove 148 will shift the container 144 inwardly, which will move the shaft 136 inwardly, until the head thereof engages in the pocket 104 and the shaft 136, abutting against the washing and extracting element will force the same so that the pocket or socket 115 will receive the head 151 formed on the inner end of a centering shaft 152 mounted in and projecting from the tubular extension 73. Packing means 153, and bearing elements 154 are arranged in the tubular extension 73 for the shaft 152. The bearing elements are arranged in spaced relation through the medium of a collar 156 formed on the shaft 152, and said bearing elements are retained in position by a cap member 157 having threaded engagement with the tubular extension 73.

The apparatus further includes a vertical drive shaft 158 for operating the receptacle

or basket on a vertical axis. The shaft 158 has its upper end formed with a head 159 provided with a conoidal shaped portion and a polygonal shaped portion. The head 159 is arranged within the tank 1. The shaft 158 extends through the opening 16 and is not only revoluble but also vertically shiftable. The shaft 158 depends from the pocket 15 and arranged within the latter is a packing medium 160 which includes a peripherally threaded gland having threaded engagement with the wall of the pocket 15. The shaft 158 below the bottom 10 has mounted thereon a beveled pinion 161 formed with an extended hub 162 which depends from the gear 161. The shaft 158 is slidably connected to the gear 161 and surrounding the upper portion of the hub 162 is a bearing element 163 which is arranged within an inverted cup 164 fixed as at 165 to the hangers 17 and 18. Arranged between the hangers 17 and 18 is a vertically movable container 166, formed with a pair of oppositely depending arms 167 which slide in the grooves 19. Arranged within the container 166 is a plurality of superposed bearing elements 168 which surround the lower end of the shaft 158. A cover 169 is provided for the container 168 and which includes a bearing 170 through which extends the shaft 158. The container 166 is formed with a pair of oppositely disposed studs 171 which are engaged by a shifting mechanism, to be presently referred to, for the purpose of moving the shaft 158 upwardly so that the head 159 thereof will engage into the pocket or socket 104 and provide for the revolving of the receptacle or basket on a vertical axis. When the shaft 158 moves upwardly the receptacle is carried therewith so that the pocket or socket 115 will be positioned to receive the head 53 of the centering shaft 52, and when in such position, during the operation of the shaft 158, the receptacle will be revolved on a vertical axis.

The shifting mechanism for the shaft 158 comprises a yoke 172 which straddles the hanger 18 and opposes the opposite sides of the container 166. The arms of the yoke 172 are cut away to provide seats 173 for and below the studs 171. The seats 173 are positioned below the studs 171 so that when the free ends of the arms of the yoke 172 are shifted upwardly, the container 166 will be carried therewith and as the bottom of the container will abut against the lower end of the shaft 158 the latter will be moved upwardly so that the head 159 thereof will engage into the socket or pocket 104, see Figure 6.

The yoke 172 is fixedly connected as at 174 to a lug 175 which projects from the outer face of the hanger, 18, and is formed at its outer end with a lateral arm 176, pivotally

connected at 177 to a link 178, and the latter has its upper end pivotally connected as at 179, to a crank arm 180 carried by a rock shaft 181. Depending from the bottom 10 of the tank 1 is a pair of hangers 182 and 183 having bearings 184 at their lower ends, and through which extend the shaft 181. One end of the shaft 181 is provided with a stop collar 185, and the other end carries a crank arm 186 to which is pivotally connected the lower end of a shifting bar 187 for the shaft 181. The upper end of the bar 187 extends through the slot 62 and is pivotally connected as at 188 with the cam 147. See Figure 5.

The connection between the bar 187 with the cam 147 consists of a crank arm 189 which extends from the base of the cam 147 and is arranged within the tubular extension 55. When the lever 149 is in the position shown in Figure 2, the drive shaft 136 is moved inwardly for the purpose of revolving the receptacle or basket, and the shaft 158 is then in a lowered position, as shown in Figure 5. If the lever 149 is moved in an opposite direction the shaft 136 is withdrawn and the container 166 elevated thereby carrying the shaft 158 so that the latter will be positioned to engage in the socket or pocket 104 for the purpose aforesaid. The container 166 does not start on its upward movement until after the lever 149 has passed center in a direction towards the teeth 71. When the lever 149 is positioned on center both drive shafts are arranged in inoperative position. The drive shaft 136 is withdrawn by the action of the pin or stud in connection with the cam groove 148 whereas the drive shaft 158 moves downwardly by gravity.

It will be assumed that the receptacle or basket is in the position shown in Figure 6 and prior to the shifting of the same from vertical to horizontal, the drive shaft 158 is lowered to clear the lower end of the receptacle. After the shaft 158 has been lowered, the receptacle is then moved to horizontal position and the lever 149 shifted in a direction towards the teeth 72 to provide for the complete lowering of the shaft 158 and the moving inwardly of the shaft 136 so that the latter will engage with the receptacle to provide for the operation thereof on a horizontal axis.

The shaft 136, as before stated, is provided with a beveled gear 139, and the latter meshes with a pinion 190 arranged within the extension 55 and carried by a vertically disposed shaft 191. The hanger 21' directly below the opening 63 in the tubular extension 55, is formed with an opening 192. Threadedly engaging with the wall of the opening 63, as well as with the wall of the opening 192, is a vertically disposed tube 193 through which extends a shaft 191. Arranged below the hanger 21' is a beveled gear

194, which is connected to the lower end of a shaft 191 and the latter depends below the opening 192.

Meshing with the gear 161 is a beveled gear 195 carried by a sleeve 196 which extends through a bearing 197 positioned in the opening 26 in the hanger 25. The driving mechanism for the gear 195, as well as the pinion 190 consists of an operating shaft 198 which extends through a bearing 199 mounted in the opening 23 and has its outer end provided with a pulley 200 driven from a transmission belt 201 operated from a motor shaft 202. The motor is indicated at 203. The shaft 198 carries a shiftable sleeve 204 provided with spaced beveled pinions 205, 206 selectively meshing with the beveled gear 194 for the purpose of driving the vertical shaft 191. The shaft 198 further carries a clutching mechanism 206', 207, for the purpose of coupling the sleeve 196 with said shaft 198 for the driving of the gear 195. A reversing gear worm shaft is indicated at 208. The purpose of shaft 208 is to drive a worm wheel with the worm 209. This worm wheel drives a cam shaft, which revolves a cam wheel. The cam wheel, in turn operates a shifting bar which shifts the friction spool so that the friction wheel 205 and friction wheel 206, are alternately brought into engagement with the driven friction wheel 194. The above constitutes the reversing gear, which causes the receptacle or basket to be driven alternately in opposite directions. The above worm wheel, cam shaft, cam wheel and shifting bar are not shown in the drawings, as it is thought unnecessary to illustrate the same. The shaft 208 is supported in the depending portion 22' and a support 211'. The driving mechanism for the shaft 191 and 158 is enclosed in a casing 212 which is arranged below the bottom 10 of the tank.

The apparatus provides for a great saving of time, labor and cost of commercial and domestic laundry and dry cleaning and dyeing operation and can be conveniently shifted from washing to drying position or from drying to washing position when desired and provides for the washing and drying in one mechanical operation and with one handling of the goods or material, and it is thought that the many advantages of a machine for the purpose referred to and in accordance with this invention can be readily understood, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in the details of construction can be had which will fall within the scope of the invention as claimed.

What I claim is:

1. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for receiving the material to be operated upon and selectively rotatable in two differ-

ent positions, means for tilting said receptacle to selectively position the same, said means further supporting said receptacle when tilted to any one of its two positions, driving means for said receptacle when in one position, driving means for said receptacle when in the other position, means common to said pair of driving means for selectively shifting one to active position and the other to inactive position with respect to said receptacle, and said receptacle provided with a pair of centering heads coacting with that driving means which is shifted to active position.

2. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for receiving the material to be operated upon and selectively rotatable in two different positions, means for tilting said receptacle to selectively position the same, said means further supporting said receptacle when tilted to any one of its two positions, driving means for said receptacle when in one position, driving means for said receptacle when in the other position, means common to said pair of driving means for selectively shifting one to active position and the other to inactive position with respect to said receptacle, said receptacle provided with a pair of centering heads coacting with that driving means which is shifted to active position, and a tank enclosing said receptacle and supporting said driving means, said tilting means pivotally mounted in said tank and surrounding said receptacle.

3. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for receiving the material to be operated upon and selectively rotatable in two different positions, means for tilting said receptacle to selectively position the same, said means further supporting said receptacle when tilted in any one of its two positions, driving means for said receptacle when in one position, driving means for said receptacle when in the other position, means common to said pair of driving means for selectively shifting one to active position and the other to inactive position with respect to said receptacle, said receptacle provided with a pair of centering heads coacting with that driving means which is shifted to active position, a liquid containing tank enclosing and spaced from said receptacle and supporting said driving means, said tilting means including a pair of shafts journaled in the body of the tank, and said receptacle bodily shiftable lengthwise within said tilting means.

4. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for the reception of the material to be operated upon and selectively rotatable in two different positions to provide for the washing and drying of the material within the

receptacle, means for shifting said receptacle to selectively position the same, said means further supporting said receptacle when in any one of its selected positions, driving means for said receptacle when in one of its positions and including a shiftable shaft, driving means for said receptacle when in the other of its positions and including a shiftable shaft, a liquid containing tank enclosing said receptacle and tilting means and having the latter pivotally mounted in the body thereof, means common to said pair of driving means for selectively shifting one shaft to active position through the tank body and the other shaft to inactive position through the tank body, said receptacle provided with a pair of centering heads coacting with a driving means when the latter is shifted to active position, and a pair of centering shafts carried by said tank and each cooperating with one of said driving means.

5. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for receiving the material to be operated upon and selectively rotatable in two different positions to provide for the washing and drying of the material carried by the receptacle, means for tilting said receptacle to selectively position the same, said means surrounding and supporting said receptacle in any one of its positions, driving means for said receptacle when in one of its positions and including a shiftable shaft, driving means for said receptacle when in the other of its positions and including a shiftable shaft, means common to said pair of driving means for selectively and simultaneously shifting one shaft to active position and the other shaft to inactive position, a tank enclosing said receptacle and supporting said tilting means and pair of driving means, and a pair of centering shafts carried by the tank, said shafts cooperating with said receptacle and each cooperating with one of said driving means.

6. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for receiving the material to be operated upon and selectively rotatable when positioned horizontally and vertically for washing and drying the material contained in the receptacle, tiltable means for shifting said receptacle from a horizontal to a vertical position and from a vertical position to a horizontal position and further for supporting said receptacle when positioned horizontally or vertically, driving means for rotating said receptacle when positioned horizontally and engaging in one end of the receptacle, driving means for rotating said receptacle when positioned vertically and including a shiftable shaft engaging in the same end of the receptacle, a tank enclosing said receptacle and including a shiftable

shaft tiltable means and further pivotally supporting the latter, said tank further supporting the driving means for said receptacle, a pair of centering shafts each coacting with one of said driving means and engageable in the other end of the receptacle, and means arranged exteriorly of the tank for shifting said tiltable means.

7. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for the reception of the material to be operated on and rotatable when positioned horizontally and vertically to provide for the washing and drying of the material carried by the receptacle, a tiltable frame for shifting said receptacle from a horizontal to a vertical position and from a vertical position to a horizontal position and further providing means for supporting said receptacle when in a horizontal and a vertical position, said frame enclosing said receptacle and the latter having means engaging with the frame for supporting the receptacle in any one of its positions, said receptacle provided with a pair of centering heads, means engaging in said heads to provide for the rotating of said receptacle when disposed horizontally, means engaging in said heads to provide for the rotating of said receptacle when disposed vertically, a tank enclosing said receptacle and supporting said means for revolving the receptacle and further supporting said tiltable means, means arranged exteriorly of the tank for shifting said tiltable means.

8. An apparatus for the purpose set forth comprising a tiltable perforated receptacle for the reception of the material to be operated upon and selectively rotatable in a horizontal and in a vertical position to provide respectively for the washing and drying of the material carried by the receptacle, means for tilting said receptacle from one position to the other, a pair of vertically disposed coacting shafts, one of said shafts being vertically shiftable and connected with a driving means therefor, a pair of horizontally disposed coacting shafts and with one shaft of such pair being horizontally shiftable and connected with a driving means therefor, said pair of vertical shafts coacting with said receptacle to provide for the rotating thereof when positioned vertically, said pair of horizontally disposed shafts coacting with said receptacle for rotating it when positioned horizontally, means common to the vertically shiftable and horizontally shiftable shafts for selectively shifting one of such shafts to active position and the other to inactive position, and a tank enclosing said receptacle and supporting said means and shafts.

9. In an apparatus for the purpose set forth a receptacle having spaced parts of the body portion thereof perforated and the remaining part non-perforated, said

non-perforated part extending into the body portion of the receptacle and of V-shape in cross section, said receptacle further including an open top and a bottom, said bottom formed with spaced perforated parts and non-perforated parts arranged between the perforated parts and a closure for the open end of said body portion.

10. An apparatus for the purpose set forth comprising a perforated material-receiving receptacle, said receptacle comprising a body portion having each terminal part thereof tapered, said body portion further having an open end and a closed end, said closed end formed with non-perforated parts, arranged in spaced relation and perforated parts arranged between the non-perforated parts, said body portion furthermore formed with perforated and non-perforated parts, the perforated and non-

perforated parts of the body portion being alternately disposed, said non-perforated parts of the body portion extended inwardly and of V-shaped cross section, and a closure for the open end of the body portion.

11. An apparatus for the purpose set forth comprising a perforated material-receiving receptacle including spaced lengthwise extending peripheral reinforcing bars each formed with a pair of spaced lugs, and a pivoted tilting means for said receptacle, said means enclosing the receptacle and cooperating with said lugs for tilting and supporting the receptacle when in tilted position.

In testimony whereof, I affix my signature hereto.

SAMUEL M. GORN