

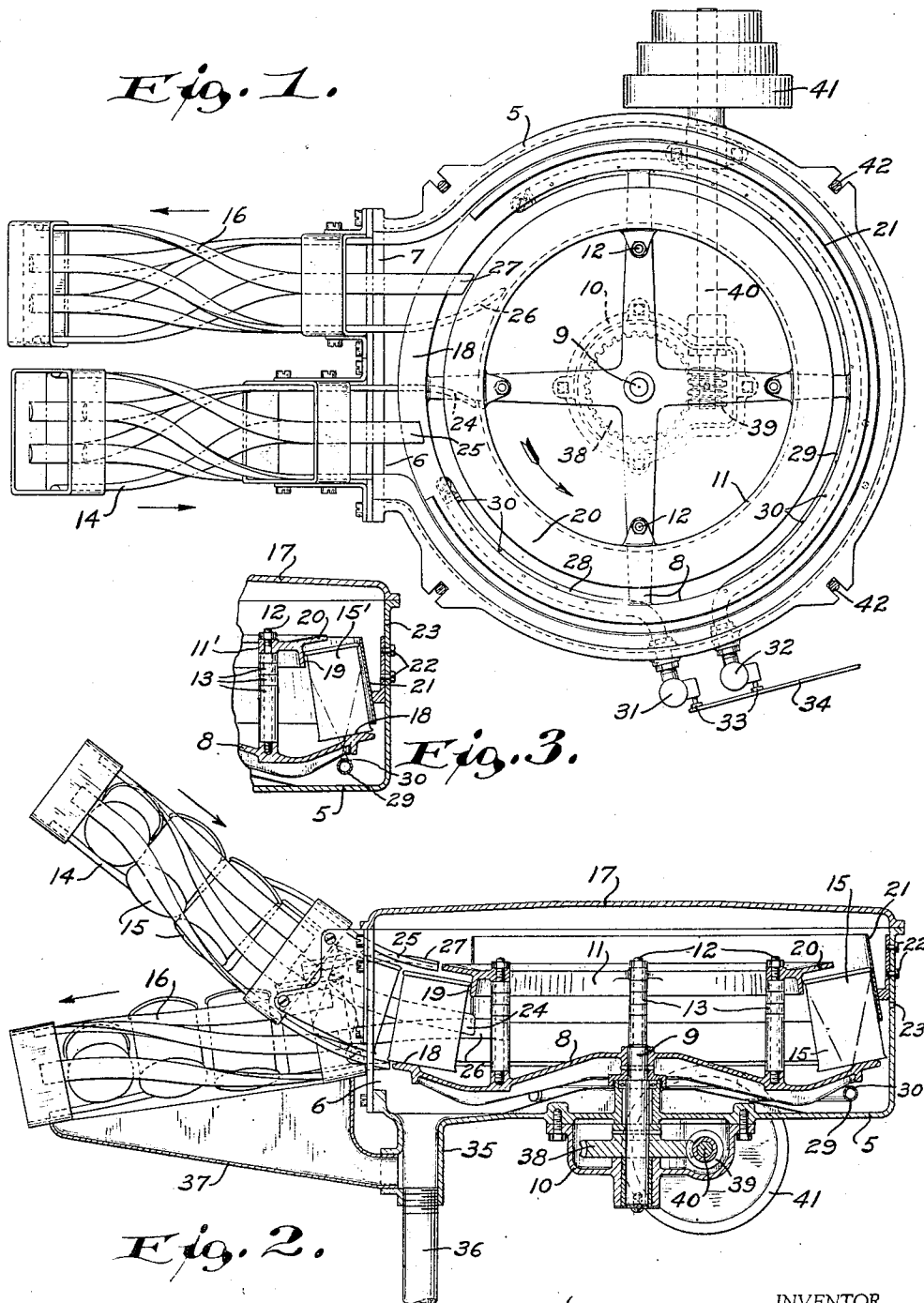
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CAN WASHER

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CAN WASHER

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This invention relates generally to improve-
ments in the art of cleansing receptacles, and
relates more specifically to improvements in the
construction and operation of can washers or
the like.

Generally defined, an object of my invention
is to provide an improved mechanism for pre-
paring a succession of receptacles for the recep-
tion of batches of commodity, which mechanism
is simple in construction and efficient in opera-
tion.

Many different types of so-called can washers
have heretofore been proposed and used com-
mercially, for cleansing various types of recep-
tacles including the ordinary relatively frail
cylindrical sanitary tin cans. In some of these
prior washing machines, the successive cans are
delivered in inverted position upon a movable
support with their axes parallel, and the interiors
of the advancing cans are subjected to the
cleansing and sterilizing action of fluids such as
hot water and steam. Due to the relatively frail
construction of the sanitary type of tin can, and
in order to avoid damaging these receptacles
during advancement thereof through the wash-
ers, it is universal prior practice to positively
propel each of the successive cans along the
fixed path of travel with the aid of a propelling
device such as a can hook which will prevent
the adjacent cans from bearing against each
other. If the successive cans are not properly
delivered to and from a washer of this type, they
frequently become jammed either at the inlet
or outlet of the machine, and thus not only dent
and otherwise damage the receptacles, but also
cause considerable loss of time in operation of
the can washer and of machines which are to
be supplied with clean receptacles by the washer.
Aside from this objection, the positive feeding
of the cans to and from these prior washers, and
the positive advancement of the receptacles
through the cleansing zone necessarily makes
these machines relatively complicated and ex-
pensive to build and operate, so that factories
having limited use for machines of this type
cannot afford to install and operate them.

It is therefore a more specific object of the
present invention to provide an improved can
washer wherein the cans are propelled along a
definite path through the cleansing zone by fric-
tion and direct contact with each other, and
which is therefore devoid of complicated can
transporting mechanism.

Another specific object of my invention is to
provide a new and useful receptacle cleansing

device wherein the receptacles are inverted for
most efficient injection and application of the
cleansing fluid, but are so positioned that they
may be effectively frictionally advanced with-
out danger of damaging relatively frail con-
tainers such as open-topped sanitary tin cans,
and are also effectively drained.

A further specific object of the invention is
to provide an improved rotary can washer of
minimum size and maximum capacity, wherein
the successive cans of various sizes may be ef-
fectively subjected to the washing and sterilizing
fluids for a desirably long period of time.

Still another specific object of this invention
is to provide an efficient can washing assemblage
which may be manufactured and operated at
extremely moderate cost, and all parts of which
are conveniently accessible for inspection.

These and other specific objects and advan-
tages will be apparent from the following de-
scription.

A clear conception of the invention, and of the
mode of constructing and of operating a can
washer embodying my improvements, may be
had by referring to the drawing accompanying
and forming a part of this specification wherein
like reference characters designate the same or
similar parts in the various views.

Fig. 1 is a plan view of one of my improved
can washers with the cover of the cleansing
chamber removed;

Fig. 2 is a vertical section through the machine,
showing cans being delivered to, through and
from the cleansing zone; and

Fig. 3 is a fragmentary vertical section
through the machine, showing the same cooper-
ating with cans of considerably reduced diameter.

While the invention has been shown and de-
scribed herein as being especially applicable to
machines for washing and sterilizing cylindrical
sanitary tin cans while inverted, it is not my
intention to thereby unnecessarily restrict the
scope, since some of the improved features may
be more generally applicable to other types of
receptacle cleansing machines, and the specific
use of the word can is intended to include other
receptacles.

Referring to the drawing, the improved can
washer shown therein comprises in general a
cup shaped main casing 5 having can inlet and
outlet openings 6, 7 respectively at the same side
thereof; a lower annular revoluble can support
8 carried by an upright shaft 9 which is rotatably
mounted in the casing 5 and in a gear casing
10 secured to the bottom of the casing 5; an

upper annular can support 11 suspended from and rotatable with the lower support 8 by means of rods 12 and spacing collars 13; mechanism for rotating the shaft 9 and supports 8, 11 at selected speeds; a can supply chute 14 for inverting and for delivering the successive cans 15 to the revolving supports 8, 11 through the inlet opening 6; a can discharge chute 16 for delivering the cleansed cans 15 from the casing 5 through the outlet opening 7; means for delivering cleansing fluids into the revolving cans 15 resting upon the support 8; and a removable closure cover 17 secured to the casing 5 and normally enclosing the washing zone.

The main casing 5 may be formed of sheet metal or by casting, and is generally cylindrical in shape. The can transporting rotor consisting of the lower and upper vertically spaced annular supports 8, 11, is adapted to receive the successive cans 15 in inverted condition, and to transport the same by friction and direct contact with adjacent cans 15, about the axis of the shaft 9 during revolution of the supports. The lower support 8 has an upper substantially frustoconical annular upper can supporting surface 18 which is inclined downwardly and inwardly toward the axis of the shaft 9, and upon which the lower open ends of the cans 15 rest; and the upper support 11 has a frustoconical annular outer surface 19 which is inclined downwardly and outwardly away from the vertical shaft axis, and against which the inner upper portions of the cans 15 are adapted to rest. The upper support 11 is also provided with an annular flange 20 extending outwardly from and above the surface 19, which is adapted to prevent the cans 15 from rising to an undesirable height away from the surface 18 due to the action of the cleansing jets; and the interior of the main casing 5 is provided with a vertically adjustable upwardly and inwardly inclined annular guide wall 21 which is normally stationary and cooperates with the upper outer portions of the cans 15. The formation and disposition of the surfaces 18, 19 and of the guide wall 21 is obviously such that the annular series of inverted cans 15 which are resting upon the lower surface 18 and are leaning against the upper surface 19, are transported through the cleansing zone by friction alone and with the inclined can axes intersecting the axis of the shaft 9 at approximately a common point.

In order to accommodate cans 15 of various heights but of the same diameter, the supporting rods 12 for the upper support 11 are each embraced by a series of spacing collars 13, and removal of similar collars 13 from all of the rods 12 will obviously permit lowering of the annular support 11 to various extents. In order to accommodate cans 15 of various diameters while maintaining the cleansing jets substantially centrally of the inverted cans, it is preferable to provide several upper supports 11 having lean-to surfaces 19 of different diameters, as shown in Figs. 2 and 3; and for this purpose the guide wall 21 is vertically adjustably supported by means of cap screws 22 adapted to coact with several series of holes 23 formed in the vertical wall of the casing 5. For cans 15 of large diameter, an upper support 11 of small diameter would be utilized, and the guide wall 21 would be positioned in its uppermost position, as shown in Fig. 2; whereas for cans 15' of smaller diameter, an upper support 11' of larger diameter would be employed, and the guide wall 21

would be lowered as in Fig. 3. However, in no case should the stationary guide wall 21 interfere with free revolution of the cans about the axis of the shaft 9, by the transporting rotor.

The can supply chute 14 which is adapted to invert and to deliver the successive cans 15 to the transporting rotor, is disposed at an angle of approximately thirty-seven and one-half degrees relative to the horizontal, and has its upper receiving end communicable with a suitable source of can supply while its lower delivery end is attached to the casing 5 at the inlet opening 6. The lower end of the chute 14 is provided with a curved guide bar 24 which projects into the casing 5 between the supports 8, 11, and this bar 24 is adapted to gently deliver the successive inverted cans 15 gravitating through the chute 14 onto and against the revolving surfaces 18, 19 in the direction of advancement thereof. The delivery end of the chute 14 is also provided with an upper inward projection 25 which prevents undesirable lifting of the entering cans 15 and insures delivery thereof beneath the flange 20 of the upper support 11. When cans 15 of different sizes are to be cleansed, the chute 14 may be removed and replaced by another of proper construction and size.

The can discharge chute 16 which delivers the successive clean cans 15 from the cleansing zone, is preferably disposed at a relatively slight angle of approximately fifteen degrees relative to the horizontal, and has its upper receiving end attached to the casing 5 at the outlet opening 7 while its lower can discharge end is directed toward a suitable place of clean can utilization. The upper end of the chute 16 is provided with a curved guide bar 26 which extends into the main casing 5 between the supports 8, 11, and against and along which the successive cleansed cans 15 are urged by the revolving rotor; and this upper chute end is also provided with an upper guide projection 27 cooperating with the rotor flange 20 to conduct the cans into the chute 16. The chute 16 is likewise formed to gently remove the successive washed cans 15 from the transporting rotor and to guide them away from the washing zone while permitting thorough drainage thereof; and when cans of different sizes are to be cleansed, the chute 16 may be replaced by another of proper size and shape.

The means for delivering cleansing sprays or jets of fluid into the inverted cans 15 while they are being carried through the cleansing zone and around the axis of the shaft 9, comprises two arcuate pipes 28, 29 disposed within the casing 5 beneath the lower support 8, and each having spray nozzles or orifices 30 formed therein so as to direct jets of the cleansing fluid approximately centrally and upwardly into the inverted cans and against the sides and bottoms thereof. The pipes 28, 29 may be supplied with cleansing fluid past valves 31, 32 respectively which are controllable by means of independent levers 33 both of which are simultaneously operable by a common actuating handle 34, and either or both of the pipes may receive cleansing fluid such as hot or cold water, or steam or air, under pressure. Ordinarily, the pipe 28 would be supplied with hot water while the pipe 29 would deliver steam into the cans. The bottom of the casing 5 is preferably provided with a drainage portion 35 for delivering spent cleansing liquid to a drain pipe 36; and a drain pan 37 may be provided beneath the discharge chute 16 for the

purpose of delivering drippings from the cleansed cans 15 into the pipe 36.

The mechanism for revolving the can transporting rotor at selected speeds, comprises a worm wheel 38 secured to the shaft 9 within the gear casing 10; a worm 39 meshing with the wheel 38 within the casing 10 and being secured to a driving shaft 40; and a variable speed cone pulley 41 secured to the outer end of the shaft 40. The shaft 40 may be journaled in bearings associated with the casings 5, 10 and power for driving the pulley 41 may be derived from any suitable source through a belt. The top closure cover 17 is removably attached to the main casing 5 by bolts 42, and removal of this cover obviously permits free and unobstructed access to the cleansing zone of the washer. The washing unit may be suspended or supported in any convenient manner, and the selected speed of rotation depends upon the size of the cans 15 and upon the rate of cleansing desired to accommodate clean can receiving equipment.

During normal operation of the improved can washer, the successive cans are delivered by gravity and with considerable momentum, downwardly through the can supply chute 14, being inverted during their passage through this chute. The cans at the lower end of the chute 14 are delivered in succession upon the constantly revolving rotor, in such manner that the lower open ends of the cans rest upon the frusto-conical surface 18 and the upper inner portions thereof lean against the frusto-conical surface 19. As the rotor advances, the successive cans are carried away from the guide bar 24 and around the axis of the shaft 9. The entire rotor is thus loaded with a succession of cans 15 each of which is in contact with the adjacent cans and which are carried about the central axis by friction alone. When the cans 15 are transported over the pipe 28, the initial cleansing fluid such as hot water is delivered upwardly through the orifices 30 into the can interiors, and thus initially washes the cans. As the cans are transported over the pipe 29 other cleansing fluid such as steam may be injected into the interiors of the inverted cans and this injection continues until the successive cans are carried beyond the end of the pipe 29. While the cans 15 are being transported through the washing zone, considerable liquid is naturally deposited into the recesses at the upper ends of the inverted cans, but due to the inclination of the cans 15 at an angle of approximately ten degrees, most of this liquid drains off into the casing 5. The cans are subsequently removed from the cleansing zone by the guide bar 26 and are pushed into the discharge chute 16 along which they are transported by the subsequent cans coming from within the cleansing zone. During their travel along the chute 16, the liquid from within the cans and the remainder of the liquid trapped in the upper can recesses, is drained and deposited into the drain pan 37 where it is discharged through the pipe 36 together with other spent liquid from the interior of the casing 5. The successive cans are thus gently delivered to the continuously revolving rotor, are transported about the rotor axis, and are finally delivered in thoroughly cleansed condition through the discharge chute 16 wherein they are drained from which they may be delivered to any suitable place of utilization.

The speed of operation of the rotor may be readily varied by applying the driving belt to any one of the series of sections of the cone pulley

41, and when it is desired to stop the machine, the handle 34 should be operated so as to shut off the supply of cleansing fluid. The guide wall 21 cooperating with the flange 20 on the upper section 11, will obviously prevent the cans 15 from being undesirably displaced while being transported by the rotor, and the absence of can hooks or other positive propelling devices obviates possibility of damaging the cans. Various sizes of cans may be operated upon by merely utilizing the spacing washers 13 to raise or lower the upper support 11, and by adjusting the position of the guide wall 21, and free access to the interior of the washing zone is made possible by the removable cover 17.

From the foregoing detailed description it will be apparent that my present invention provides a washer which is extremely simple and compact in construction while at the same time being highly efficient in operation. The improved washer has proven highly successful in actual commercial use, especially for washing relatively frail sanitary cans, and may be operated at any desired speed without danger of damaging the relatively frail cans 15. The apparatus can obviously be manufactured and sold at extremely moderate cost, and is sanitary in every respect. The inclination of the cans 15 at an angle of approximately ten degrees is important both because friction propulsion is made readily possible, and also because of the drainage effected due to this inclination. This drainage of liquid from the tops of the cans obviously permits shortening of the discharge chute 16 to a minimum, and by twisting the cans as they pass through this chute, final complete drainage is assured.

It should be understood that it is not desired to limit this invention to the exact details of construction or to the precise mode of use, herein shown and described, for various modifications within the scope of the claims may occur to persons skilled in the art.

I claim:

1. In a can washer, a lower support movable horizontally and having a continuous downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper support movable with said lower support and having a continuous lean-to portion formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed guideway to all portions of which cans are admissible and along which a continuous succession of contacting cans is transportable, and means for injecting cleansing fluid upwardly into the lower open ends of the inverted inclined cans being transported by said supports.

2. In a can washer, a lower support movable horizontally and having a continuous downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper support movable with said lower support and having a continuous lean-to portion formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed guideway to all portions of which cans are admissible and along which a continuous succession of contacting cans is transportable, means for injecting cleansing fluid upwardly into the lower

open ends of the inverted inclined cans being transported by said supports to lift the cans away from said lower support, and means movable with said supports for limiting the movement of the cans away from said surface due to said fluid injection.

3. In a can washer a lower support movable horizontally and having a continuous downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper support movable with said lower support and having a continuous lean-to portion formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed guideway to all portions of which cans are admissible and along which a continuous succession of contacting cans is transportable, means for injecting cleansing fluid upwardly into the lower open ends of the inverted inclined cans being transported by said supports to lift the cans away from said lower support, and stationary means continuously cooperable with the outer side portions of the inwardly inclined cans to maintain the same against said lean-to portion.

4. In a can washer, a lower support movable horizontally and having a continuous downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper support movable with said lower support and having a continuous lean-to portion formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed guideway to all portions of which cans are admissible and along which a continuous succession of contacting cans is transportable, means for injecting cleansing fluid upwardly into the lower open ends of the inverted inclined cans being transported by said supports to lift the cans away from said lower support, means movable with said supports for limiting the movement of the cans away from said surface due to said fluid injection, and stationary means continuously cooperable with the outer side portions of the inwardly inclined cans to maintain the same against said lean-to portion.

5. In a can washer, a lower support revolvable about an upright axis and having a continuous annular downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper support revolvable with said lower support and having a continuous annular downwardly and outwardly inclined lean-to surface formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed annular guideway to all portions of which cans are laterally admissible and along which a continuous annular succession of contacting cans is transportable, and means for injecting jets of cleansing fluid upwardly into the lower open ends of the inverted inclined cans being advanced about said axis by said supports.

6. In a can washer, a lower support revolvable about an upright axis and having a continuous annular downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper

support revolvable with said lower support and having a continuous annular downwardly and outwardly inclined lean-to surface formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed annular guideway to all portions of which cans are laterally admissible and along which a continuous annular succession of contacting cans is transportable, means for injecting jets of cleansing fluid upwardly into the lower open ends of the inverted inclined cans being advanced about said axis by said supports, to lift the cans away from said lower support, and annular means revolvable with said supports for limiting the elevation of the cans away from said lower support surface due to said fluid jet injection.

7. In a can washer, a lower support revolvable about an upright axis and having a continuous annular downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper support revolvable with said lower support and having a continuous annular downwardly and outwardly inclined lean-to surface formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed annular guideway to all portions of which cans are laterally admissible and along which a continuous annular succession of contacting cans is transportable, means for injecting jets of cleansing fluid upwardly into the lower open ends of the inverted inclined cans being advanced about said axis by said supports to lift the cans away from said lower support, and a stationary upwardly and inwardly inclined wall continuously cooperable with the outer side portions of the inwardly inclined cans to maintain the same against said lean-to surface.

8. In a can washer, a lower support revolvable about an upright axis and having a continuous annular downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans, an upper support revolvable with said lower support and having a continuous annular downwardly and outwardly inclined lean-to surface formed to coact directly with the inner upper side portions of inverted inwardly inclined cans resting upon said lower support surface, said lower and upper supports being formed to provide a continuous unobstructed annular guideway to all portions of which cans are laterally admissible and along which a continuous annular succession of contacting cans is transportable, means for injecting jets of cleansing fluid upwardly into the lower open ends of the inverted inclined cans being advanced about said axis by said supports to lift the cans away from said lower support, annular means revolvable with said supports for limiting the elevation of the cans away from said lower support surface due to said fluid jet injection, and a stationary upwardly and inwardly inclined wall continuously cooperable with the outer side portions of the inwardly inclined cans to maintain the same against said lean-to surface.

9. In a can washer, a lower support having an annular downwardly and inwardly inclined can supporting surface revolvable about an approximately vertical axis and formed to coact directly with the lower open ends of inverted cans, an upper support having an annular downward-

ly and outwardly inclined lean-to surface revolvable with said lower surface and formed to coact directly with the upper inner side portions of the cans resting upon said lower surface, said lower and upper supports being formed to provide a continuous unobstructed annular can receiving space to all portions of which cans are inwardly admissible and along which a continuous annular succession of contacting cans is transportable, and means for injecting cleansing fluid upwardly into the lower open ends of the cans being advanced by said supports.

10. In a can washer, a lower support having an annular downwardly and inwardly inclined can supporting surface revolvable about an approximately vertical axis and formed to coact directly with the lower open ends of inverted cans, an upper support having an annular downwardly and outwardly inclined lean-to surface revolvable with said lower surface and formed to coact directly with the upper inner side portions of the cans resting upon said lower surface, said lower and upper supports being formed to provide a continuous unobstructed annular can receiving space to all portions of which cans are inwardly admissible and along which a continuous annular succession of contacting cans is transportable, means for injecting cleansing fluid upwardly into the lower open ends of the cans being advanced by said supports, and means revolvable with said supports for limiting the movement of the cans away from said lower supporting surface due to said upward fluid injection.

11. In a can washer, a pair of superimposed concentric supports simultaneously revolvable about an approximately upright axis, the lower of said supports having an annular downwardly and inwardly inclined surface formed to coact directly with the outer portions of the lower open ends of inverted cans resting thereon and the upper of said supports having a concentric downwardly and outwardly inclined lean-to surface formed to coact directly with the upper inner side portions of the same cans, said lower and upper surfaces providing a continuous annular unobstructed can receiving space along which a continuous annular succession of contacting inwardly and upwardly inclined cans is transportable, and means for injecting cleansing fluid upwardly into the lower open ends of the cans.

12. In a can washer, a rotor assemblage revolvable about an upright axis and having a lower annular downwardly and inwardly inclined surface formed to coact directly with the lower open ends of inverted cans resting thereon and also having an upper annular concentric downwardly and outwardly inclined lean-to surface formed to coact directly with the upper inner side portions of the same cans, said annular surfaces providing a continuous unobstructed can receiving space along which a continuous annular succession of contacting cans is transportable, and means for injecting cleansing fluid into the lower open ends of the cans.

13. In a can washer, a rotor assemblage revolvable about an upright axis and having a lower annular downwardly and inwardly inclined surface formed to coact directly with the lower open ends of inverted cans resting thereon and also having an upper annular concentric downwardly and outwardly inclined lean-to surface formed to coact directly with the upper inner side portions of the same cans, said annular surfaces providing a continuous unobstructed can

receiving space along which a continuous annular succession of contacting cans is transportable, means for injecting cleansing fluid into the lower open ends of the cans, and means carried by said assemblage for limiting the movement of the cans away from said lower surface and along said upper surface.

14. In a can washer, a rotor assemblage revolvable about an upright axis and having a lower annular downwardly and inwardly inclined surface formed to coact directly with the lower open ends of inverted cans resting thereon and also having an upper annular concentric downwardly and outwardly inclined lean-to surface formed to coact directly with the upper inner side portions of the same cans, said annular surfaces providing a continuous unobstructed can receiving space along which a continuous annular succession of contacting cans is transportable, means for injecting cleansing fluid into the lower open ends of the cans, and stationary means cooperable with the outer side portions of the inwardly inclined cans to retain the same against said lean-to surface.

15. In a can washer, a rotor assemblage revolvable about an upright axis and having a lower annular downwardly and inwardly inclined surface formed to coact directly with the lower open ends of inverted cans resting thereon and also having an upper annular concentric downwardly and outwardly inclined lean-to surface formed to coact directly with the upper inner side portions of the same cans, said annular surfaces providing a continuous unobstructed can receiving space along which a continuous annular succession of contacting cans is transportable, means for injecting cleansing fluid into the lower open ends of the cans, means carried by said assemblage for limiting the movement of the cans upwardly away from said lower surface, and stationary means cooperable with the outer side portions of the cans to retain the same against said lean-to surface.

16. In a can washer, a rotor assemblage revolvable about an upright axis and having an annular downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans resting thereon, and also having an annular concentric downwardly and outwardly inclined lean-to surface formed to coact directly with the inner side portions of said cans, a guide wall extending around and in spaced relation to said rotor assemblage to define a canway therebetween, said guide wall having an upwardly and inwardly inclined surface cooperable with the outer side portions of the inwardly inclined cans to retain the cans in inclined position on the rotor assemblage, and means providing for vertical adjustment of said guide wall to vary the effective width of the canway.

17. In a can washer, a rotor assemblage revolvable about an upright axis and having an annular downwardly and inwardly inclined revolving can supporting surface formed to coact directly with the lower open ends of inverted cans resting thereon, and also having an annular concentric downwardly and outwardly inclined simultaneously revolving lean-to surface formed to coact directly with the inner side portions of said cans, a normally stationary guide wall extending around and in spaced relation to said rotor assemblage to define an approximately annular canway around said axis, said stationary wall having an upwardly and inwardly inclined

surface cooperable with the outer side portions of the inwardly inclined cans to retain the same in inclined position upon the rotor assemblage, and means for effecting adjustment of said guide wall to vary the effective width of the canway.

18. In a can washer, a rotor assemblage revoluble about an upright axis and having an annular downwardly and inwardly inclined revolving can supporting surface formed to coact directly with the lower open ends of inverted cans resting thereon, and also having an annular concentric downwardly and outwardly inclined revolving lean-to surface formed to coact directly with the inner side portions of said cans, said annular surfaces providing a continuous unobstructed can receiving space along which a continuous annular succession of cans is transportable, means disposed above said downwardly and inwardly inclined rotor surface for limiting the movement of the cans away from said surface, 20

and means for effecting vertical adjustment of said movement limiting means to vary the effective height of said space.

19. In a can washer, a rotor assemblage revoluble about an upright axis and having an annular downwardly and inwardly inclined can supporting surface formed to coact directly with the lower open ends of inverted cans resting thereon, and also having an annular concentric downwardly and outwardly inclined lean-to surface formed to coact directly with the inner side portions of said cans, an upper wall extending around said axis in spaced relation to said downwardly and inwardly inclined rotor surface for limiting the movement of the cans away from said lower surface and along said lean-to surface, and means for effecting vertical adjustment of said upper wall to vary the effective height of the canway formed by said rotor surfaces.

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