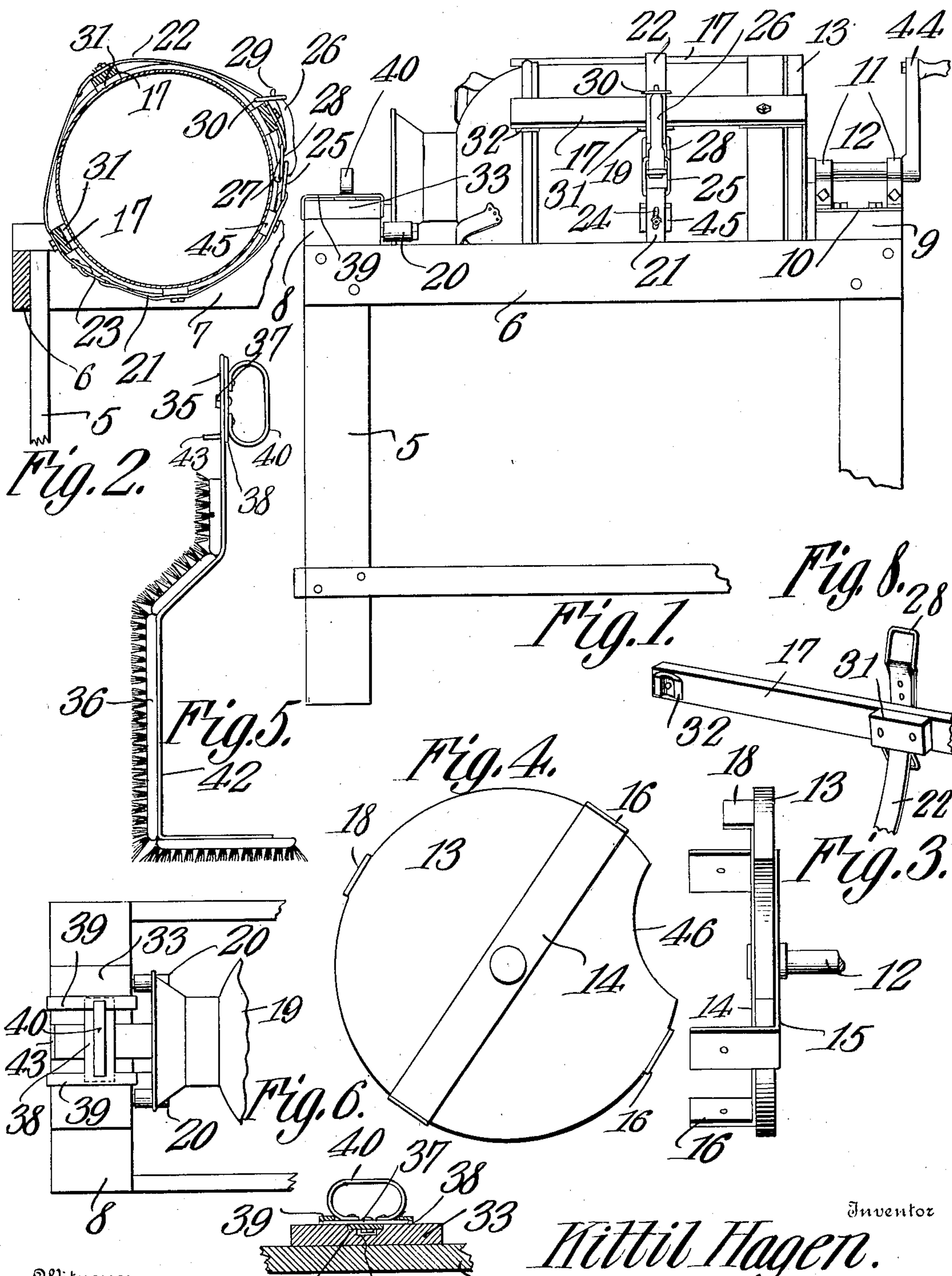


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PATENTED MAY 19, 1908.

K. HAGEN.
CAN CLEANER.

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UNITED STATES PATENT OFFICE.

KITTIL HAGEN, OF WEBSTER, SOUTH DAKOTA.

CAN-CLEANER.

No. 887,795.

Specification of Letters Patent.

Patented May 19, 1908.

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To all whom it may concern:

Be it known that I, KITTIL HAGEN, a citizen of the United States, residing at Webster, in the county of Day and State of South Dakota, have invented a new and useful Can-Cleaner, of which the following is a specification.

This invention relates to machines for washing milk cans and similar containing vessels and has for its object to provide a strong, durable and thoroughly efficient machine of this character for scouring and cleaning the interior walls of the cans.

A further object of the invention is to provide a can washer including a supporting frame having a can holder mounted for rotation thereon and provided with a cleaning element or brush which bears against the interior walls of the can when the holder is rotated thereby to thoroughly clean the same.

A further object is to provide improved means for clamping the can in the holder, and means for locking the brush against accidental displacement during the cleaning operation.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a side elevation of a can washer constructed in accordance with my invention. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a side elevation of the cap of the can holder. Fig. 4 is a front elevation of the same. Fig. 5 is a side elevation of the cleaning element or brush. Fig. 6 is a top plan view showing the manner of locking the brush on the supporting frame. Fig. 7 is a transverse sectional view of the same. Fig. 8 is a detail perspective view of a portion of the can holder and its associated parts.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved can washer forming the subject matter of the present invention includes a supporting frame comprising corner posts or uprights 5 connected by longitudinal and

transverse bars 6 and 7 and provided with transverse top plates 8 and 9 which latter, are bolted or otherwise rigidly secured to the upper ends of the corner posts, as shown. Secured to the transverse top plate 9 is a casting 10 provided with spaced bearings 11 in which is journaled a stub shaft 12.

Secured to the inner end of the stub shaft 12 is a cylindrical disk or head 13 having its inner and outer faces reinforced by transverse strap irons or bars 14 and 15. The opposite ends of the strap iron 14 are bent laterally to produce terminal fingers 16 to which are bolted or otherwise rigidly secured longitudinal clamping arms 17, there being a similar attaching finger, 16, formed on one end of the brace 15 for engagement with a corresponding clamping arm, as shown. The opposite end of the transverse brace 15 is provided with a relatively short finger 18 which bears against and forms a guide for the milk can, indicated at 19.

The milk can 19 is supported between the arms 17 with its large end bearing against the head 13 of the can holder and with its reduced end or neck engaging anti-friction rollers 20 journaled on suitable pins extending laterally from the top plate or bar 8. Surrounding the longitudinal arms 17 of the can holder is a clamping band or member preferably formed in two sections 21 and 22 having their adjacent ends pivotally connected by a loop or link 23. The long section 22 is secured to the exterior faces of the arms 17 and is provided with elongated slots 24 in which are seated screws or similar fastening devices which serve to secure said section in position on the arms and at the same time allow a limited longitudinal movement of the strap section with reference to said arms.

Secured to the free end of the relatively short strap section 21 is a link 25 on which is pivotally mounted a locking lever 26 having a hooked terminal 27 for engagement with a link 28 carried by the free end of the strap section 22 whereby the strap sections may be clamped in engagement with the can and thus prevent accidental displacement of the same when the holder is rotated. One end of the locking lever is preferably formed with a terminal lug 29 which engages a bail 30 pivoted on the strap section 22 when the locking lever is in operative position so as to prevent the strap sections from becoming detached. Secured to the inner faces of the

longitudinal arms at the strap section 22 are spacing blocks 31 which bear against the intermediate portion of the can, there being cushioning members 32 preferably formed of rubber or other yieldable material secured to the ends of the arms 17 for engagement with the adjacent exterior surface of the can, as shown. Secured to the upper surface of the end plate 8 is a block 33 having a transverse groove 34 formed therein for the reception of the reduced extension 35 of the cleaning element or brush 36. Pivotally mounted at 37 on the extension 35 is a locking plate 38 adapted to extend beneath spaced locking bars or guides 39 secured to the block 33 on opposite sides of the transverse groove 34 when the locking plate 38 is rotated by manipulating the handle 40. The lower wall of the groove 34 is formed with a seating recess 41 for the reception of the pivot 37 so that the locking member may be rotated without danger of binding on the top plate 8.

The cleaning element or brush 36 is preferably formed of a plurality of brush sections arranged to conform to the interior of the can and rigidly clamped together by a strap iron 42, the reduced extension 35 of said strap iron being provided with a depending lug 43 which bears against the inner face of the transverse top plate 8 and serves to limit the longitudinal movement of the cleaning element and also to properly position the same within the can.

One end of the stub shaft 12 is provided with a terminal crank 44 by means of which the holder may be rotated during the cleaning operation. The face of the short strap section 21 is preferably provided with spaced blocks 45 which bear against the exterior walls of the can so as to prevent denting or otherwise injuring said walls when the clamping member is adjusted.

Attention is here called to the fact that the braces 14 and 15 intersect at the center of the disk or head 13 and thus not only serve to reinforce and strengthen the head but also form a support for the inner end of the stub shaft.

In operation the can is filled with a quantity of hot water and said can placed in the holder and the clamping band adjusted in the manner before described, the brush having been previously inserted within the can. The handle 40 is then partially rotated which causes the opposite ends of the locking plate 38 to engage the lower faces of the locking bars 39 and thus prevent accidental displacement of the cleaning element. The operator then grasps the handle 44 and rotates the holder first in one direction and then in the other, which causes the brush sections to effectually clean or scour the interior walls of the can. Attention is here called to the fact that the periphery of the disk or head 13

is provided with a segmental notch or recess 46 so that the lower rim of the can may be conveniently grasped when positioning the can within or removing said can from the holder.

When the can has been thoroughly cleaned the locking member 40 is rotated until the plate 38 is in alinement with the extension 35 and in which position the can carrying the brush may be removed from the supporting frame after the clamping band has been released.

The machines may be made in different sizes and shapes and constructed of wood, metal or other suitable material.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. A can washer including a supporting frame, a can holder mounted for rotation on one end of the frame, a cleaning element detachably secured to the opposite end of the frame and extending within the can, a projection depending from the cleaning element and adapted to engage the frame for limiting the longitudinal movement of said cleaning element, and a locking member carried by the cleaning element and adapted to engage the frame for locking said cleaning element against vertical movement.

2. A can washer including a supporting frame having a seating recess, a can holder mounted for rotation on one end of the frame, a cleaning element mounted on the opposite end of the frame and having one end thereof seated in said recess and its opposite end extended within the can, and a locking member carried by the cleaning element and engaging the frame for locking the cleaning element in the seating recess.

3. A can washer including a supporting frame having spaced locking members secured thereto, a can holder mounted for rotation on the frame, and a cleaning element extending within the can and provided with a pivoted locking section adapted to engage said members when the section is rotated thereby to lock the cleaning element in engagement with the frame.

4. A can washer including a supporting frame having one end thereof provided with a transverse channel, locking members disposed on opposite sides of the channel, a can holder mounted for rotation on one end of the frame, a cleaning element adapted to engage the interior walls of the can and having one end thereof seated in said channel, and a locking plate pivotally mounted on the cleaning element and adapted to engage the locking members for preventing accidental displacement of the cleaning element.

5. A can washer including a supporting frame, a stub shaft journaled on one end of the frame and provided with a head, arms extending laterally from the head for engagement with the can, a clamping member encircling the arms, a cleaning element secured to the opposite end of the frame and extending within the can, and means for locking the brush against accidental displacement.

6. A can washer including a supporting frame, a bracket secured to one end of the frame, a stub shaft journaled in said bracket, a crank secured to one end of the stub shaft, a head secured to the opposite end of the shaft and provided with a peripheral recess, longitudinal arms extending laterally from the head for engagement with the can, a clamping member encircling the arms, rollers journaled on the frame and adapted to support the adjacent end of the can, and a brush mounted on the frame and extending within the can.

7. A can washer including a supporting frame, a stub shaft journaled on one end of the frame, a disk secured to the stub shaft, transverse braces disposed on opposite sides of the head and provided with terminal attaching fingers, longitudinal arms secured to said fingers for engagement with the can, a clamping member encircling the arms, locking bars secured to the opposite ends of the frame, there being a groove formed between the locking bars, a brush extending within the can and having a reduced extension for engagement with the walls of the groove, a locking plate pivoted on the reduced extension and adapted to engage the locking bars, and a handle secured to said pivoted locking plate for rotating the same.

8. A can washer including a supporting frame, a stub shaft journaled on one end of the frame, a head secured to the stub shaft and provided with a peripheral recess, transverse bars secured to the opposite faces of the head and provided with attaching fingers, longitudinal arms secured to said fingers and having their inner faces provided with spac-

ing blocks for engagement with the can, a sectional clamping band one section of which is secured to the arms, the opposite section being provided with a locking lever adapted to engage the mating section for clamping the arms in engagement with the can, and a cleaning element secured to the opposite end of the frame and extending within the can.

9. A can washer including a supporting frame, a stub shaft journaled on one end of the frame, a head secured to the stub shaft and provided with a peripheral recess, a sectional clamping band surrounding the arms and having one section thereof formed with elongated slots, fastening devices extending through said slots and engaging the arms, a clamping lever pivotally mounted on the opposite section and provided at its pivoted end with a hook adapted to engage the end of the mating section, a lug secured to the opposite end of the clamping lever, a bail adapted to engage the lug, rollers journaled on the frame for supporting one end of the can, a brush secured to the frame and extending within the can, and means for locking the brush in position on the frame.

10. A can washer including a supporting frame, a can holder mounted for rotation on one end of the frame, a block secured to the opposite end of the frame and provided with a transverse groove, locking bars disposed on opposite sides of the groove, a brush extending within the can and having a reduced extension for engagement with the walls of the groove, a stop lug depending from the extension and adapted to engage the adjacent end of the block, a locking section pivotally mounted on the extension and adapted to engage the locking bars, and a handle secured to the locking section for rotating the latter.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

KITTIL HAGEN.

Witnesses:

ALBERT SMITH,
ELI STEARNS.