

No. 705,133.

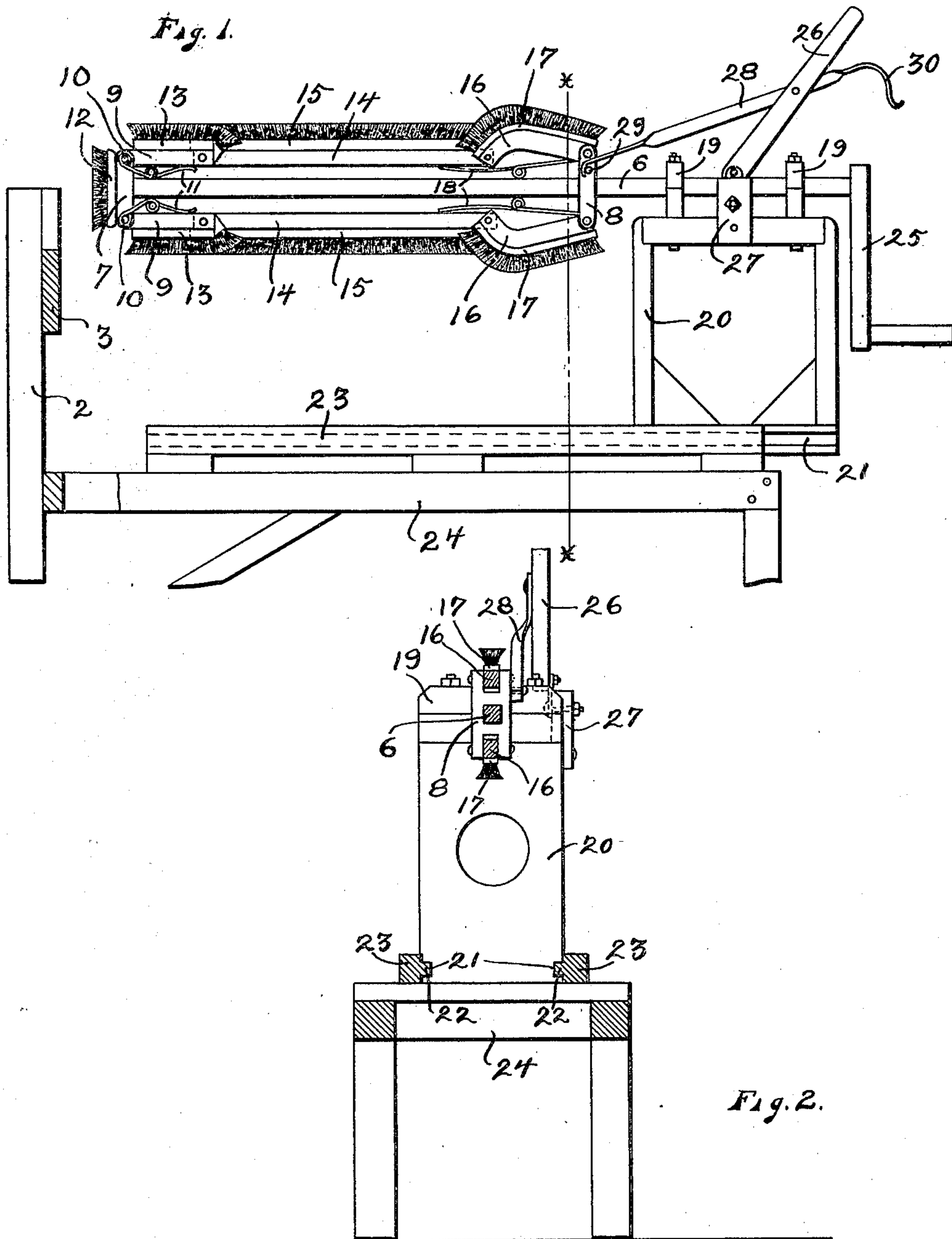
Patented July 22, 1902.

F. T. PIERCE & A. E. KUCHENBECKER.
CAN WASHER.

(Application filed Feb. 21, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.

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M. C. Norman

INVENTORS
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THEIR ATTORNEYS.

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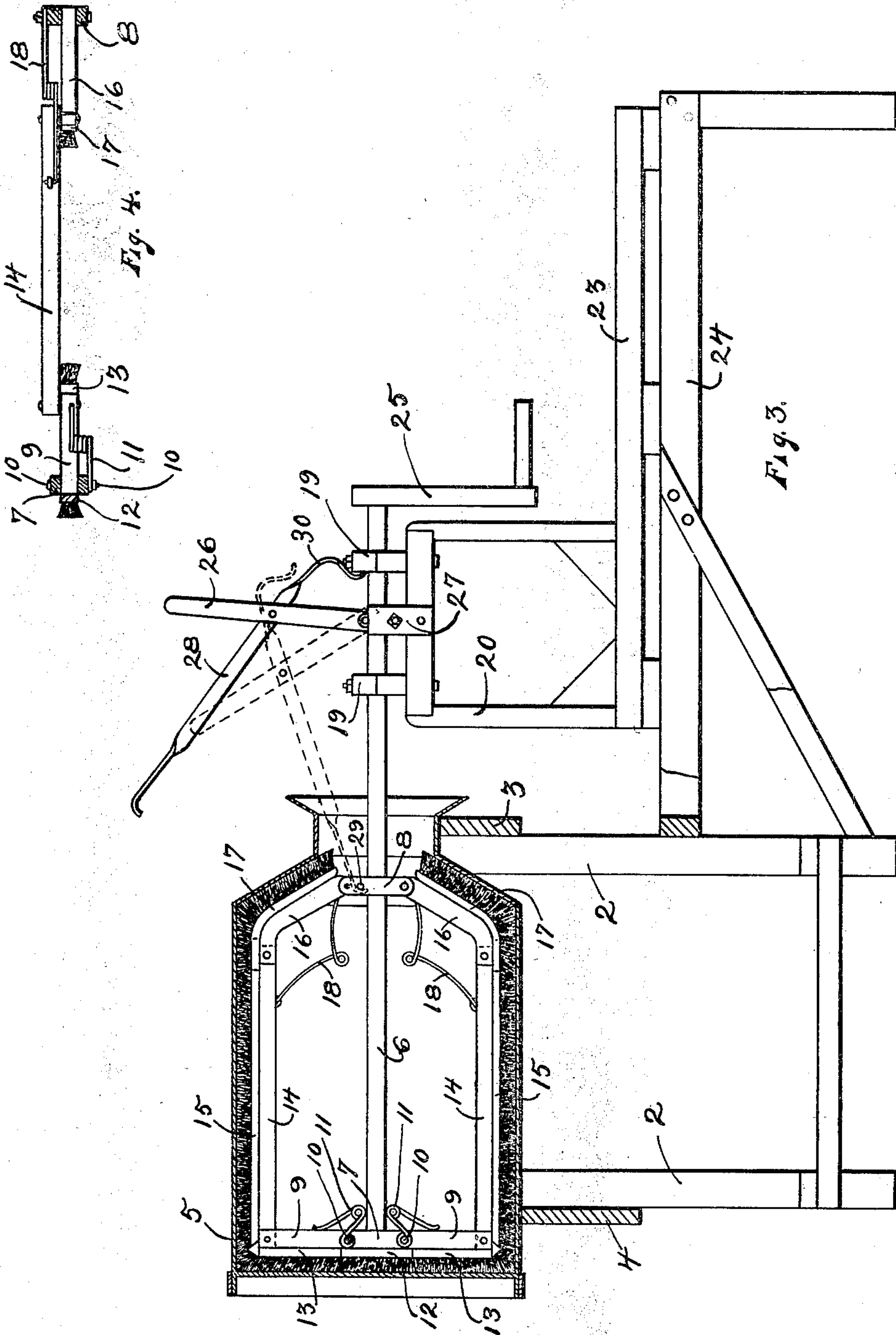
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WITNESSES.

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UNITED STATES PATENT OFFICE.

FRED T. PIERCE AND AWALD E. KUCHENBECKER, OF GENEVA, MINNESOTA.

CAN-WASHER.

SPECIFICATION forming part of Letters Patent No. 705,133, dated July 22, 1902.

Application filed February 21, 1902. Serial No. 95,035. (No model.)

To all whom it may concern:

Be it known that we, FRED T. PIERCE and AWALD E. KUCHENBECKER, of Geneva, Free-born county, Minnesota, have invented certain new and useful Improvements in Can-Washers, of which the following is a specification.

The object of our invention is to provide an apparatus for rapidly and effectively cleansing the inside walls of milk-cans.

The invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a can-washer apparatus embodying our invention, showing the brush devices contracted or collapsed to enter the mouth of the can. Fig. 2 is a sectional view on the line *x x* of Fig. 1. Fig. 3 is a view showing the brush in its expanded position within a milk-can ready to be rotated to cleanse the walls thereof. Fig. 4 is a detail section of the brush construction.

In the drawings, 2 represents a suitable frame having cross bars or boards 3 and 4, that are adapted to receive and support, respectively, the neck and lower portion of a milk-can 5. This can is of the ordinary construction and requires no detailed illustration.

6 is a rod, preferably square in cross-section for a portion of its length, whereon heads 7 and 8 are arranged, the former being fixed and the latter movable. To the head 7 brush-carrying arms 9 are pivoted by means of bolts 10, and these arms are normally held in line with the head 7 by springs 11, that are secured to said head. A brush 12 is provided on the head 7, and similar brushes 13 are carried by the arms 9 and are movable therewith. These brushes 13 when the arms are expanded are in line with the brush 12 and are adapted to sweep over the bottom of the can and thoroughly cleanse the same. Near the outer ends of the arms 9 we pivot arms 14, carrying brushes 15, that are adapted to engage the side walls of the can, and to the arms 14 we pivot one end of the arms 16, whose opposite ends are pivoted to the movable head 8.

Upon the arms 16 we arrange brushes 17, which are adapted to clean the inner walls of the flaring portion of the can between its neck and the body. The arms 14 and 16 are normally held in their expanded position by means of springs 18. These brushes, carried by the arms heretofore described, fit into all the corners and angles on the inside of a can, where the impurities are usually found, and quickly dislodge the same from the walls of a can. In washing cans by hand it nearly always happens that some spot in a corner or angle of the can that is hard to reach with a cloth or scrubbing-brush will be missed by the person washing the can and some impurities remain on the walls which though not noticeable unless the can is carefully examined will be found sufficient to taint the milk or cream. By providing the yielding frame carrying the series of brushes we are able to avoid all these objections, as the brushes will reach every spot on the interior of the can and thoroughly cleanse the same far more expeditiously and thoroughly than could be accomplished by hand.

Any suitable means may be employed for revolving the brush-frame. We prefer, however, to mount the rounded outer end of the rod 6 in suitable bearings 19 on a frame 20, that is provided at its lower end with grooves 21 to receive ribs 22, provided on the parallel guiding bars or rails 23, that are mounted upon a suitable frame 24. The frame 20 is moved back and forth along the rails to insert the brush-frame into the can or remove it therefrom. The end of the rod 6 is provided with a suitable crank 25, by means of which the brush-frame is revolved. To contract the brush-frame, the head 8 is moved along the rod or bar 6 until the arms of the frame assume substantially the position shown in Fig. 1, when the frame can be readily inserted into the mouth of a can. This movement of the head 8 may be effected in various ways, such as the operator reaching into the mouth of the can and drawing the head out of the same along the rod and collapsing the frame. We may, however, prefer to provide a lever 26, pivoted on a block 27 and carrying a hook 28, that is adapted to engage a pin 29 on the movable head and draw it along the rod when the lever is oper-

ated. When not in use, the lever and hook are placed in the position shown in full lines in Fig. 3, where an extension 30 of the hook engages one of the bearings 19 and limits the backward movement of the lever.

In the operation of our invention the can to be washed is first placed in the rack or frame provided therefor, the brush-frame is slipped in its contracted form into the mouth of the can, and then the movable head is slid along the rod until the brush-arms have expanded and the brushes are in contact with the inside of the can, a sufficient quantity of water having previously been placed therein to insure the thorough cleaning of the same. The operator then grasps the handle of the crank 25 and revolves the brush-frame, causing the brushes to sweep over the inside surface of the can and thoroughly scrub the same of any impurities that may have lodged thereon. A few revolutions of the brushes will serve to clean a can, and it is then removed by collapsing the spring-frame, another can placed on the rack, and the operation repeated. In this way a large number of cans can be quickly and thoroughly cleaned every day, an operation which heretofore required a great deal of time and considerable labor, and then resulted in only partially cleaning the cans.

The brushes are readily removable, so that when worn out they can be replaced by others. Any suitable material may be employed in the construction of the apparatus; but we prefer to make the rod of iron or steel and the heads of light castings.

In various ways the details of construction may be modified without departing from our invention.

We claim as our invention—

1. A can-washer, comprising a frame 2 adapted to support a can in a horizontal position, a frame 20 provided near said frame 2, a rod substantially square in cross-section mounted on said frame 20, a fixed and a movable head provided on said rod, a collapsible frame pivotally connected with said heads and provided with a series of brushes, springs for normally holding said frame in its expanded position, means for revolving said rod and brush-frame, and a lever device provided on said frame 20 and having an arm to engage said sliding head to reciprocate it toward or from said fixed head, for the purpose specified.
2. The combination, with a suitable frame 2 adapted to support a milk-can in a horizontal position, of a frame 20 movable toward or from the open end of the can, guide-rails between which said frame 20 is slidable, a rod provided with a suitable crank and mounted

in bearings on said frame 20 and adapted to be projected into the mouth of the can, fixed and movable heads provided on said rod, a collapsible brush-frame pivotally connected with said heads and provided with a series of brushes, a lever 26, and a hook 28 provided on said lever and adapted to engage said movable head to draw it lengthwise away from said fixed head when said lever is operated to collapse said brush-frame.

3. A can-washer, comprising a frame whereon the can is supported in a substantially horizontal position, a frame 20, guide-rails whereon said frame 20 is slidable toward or from the mouth of the can, a rod mounted in bearings on said frame 20, fixed and movable heads provided on said rod, a brush-frame provided with a series of brushes pivotally connected with said heads, springs for normally holding said brush-frame in its expanded position and allowing it to collapse and be removed from the can when said movable head is pushed or drawn away from said fixed head, substantially as described.

4. A can-washer, comprising a fixed frame adapted to support a can in a horizontal position, a sliding frame adapted to be moved toward or from the mouth of a can supported on said fixed frame, a rod mounted in bearings on said sliding frame, a fixed and a sliding head provided on said rod, a collapsible brush-frame pivotally connected with said heads and carrying a series of brushes, springs for normally holding said brush-frame in its expanded position, a crank provided on said rod for revolving the same, and means provided near said crank for drawing said movable head toward said sliding frame to collapse said brush-frame.

5. A can-washer, comprising a suitable frame adapted to support a can in a horizontal position, a rod, a fixed and a movable head provided on said rod, arms 9, 14 and 16 arranged in pairs and pivotally connected together and to said heads, brushes carried by said arms and adapted to engage the inner walls of the can, springs for normally holding said arms in their expanded position and permitting them to be drawn in toward said rod when said movable head is moved away from said fixed head, an adjustable support for said rod, and means for revolving said rod therein.

In witness whereof we have hereunto set our hands this 15th day of February, 1902.

FRED T. PIERCE.

AWALD E. KUCHENBECKER.

In presence of—

D. E. JONES,

R. W. PIERCE.