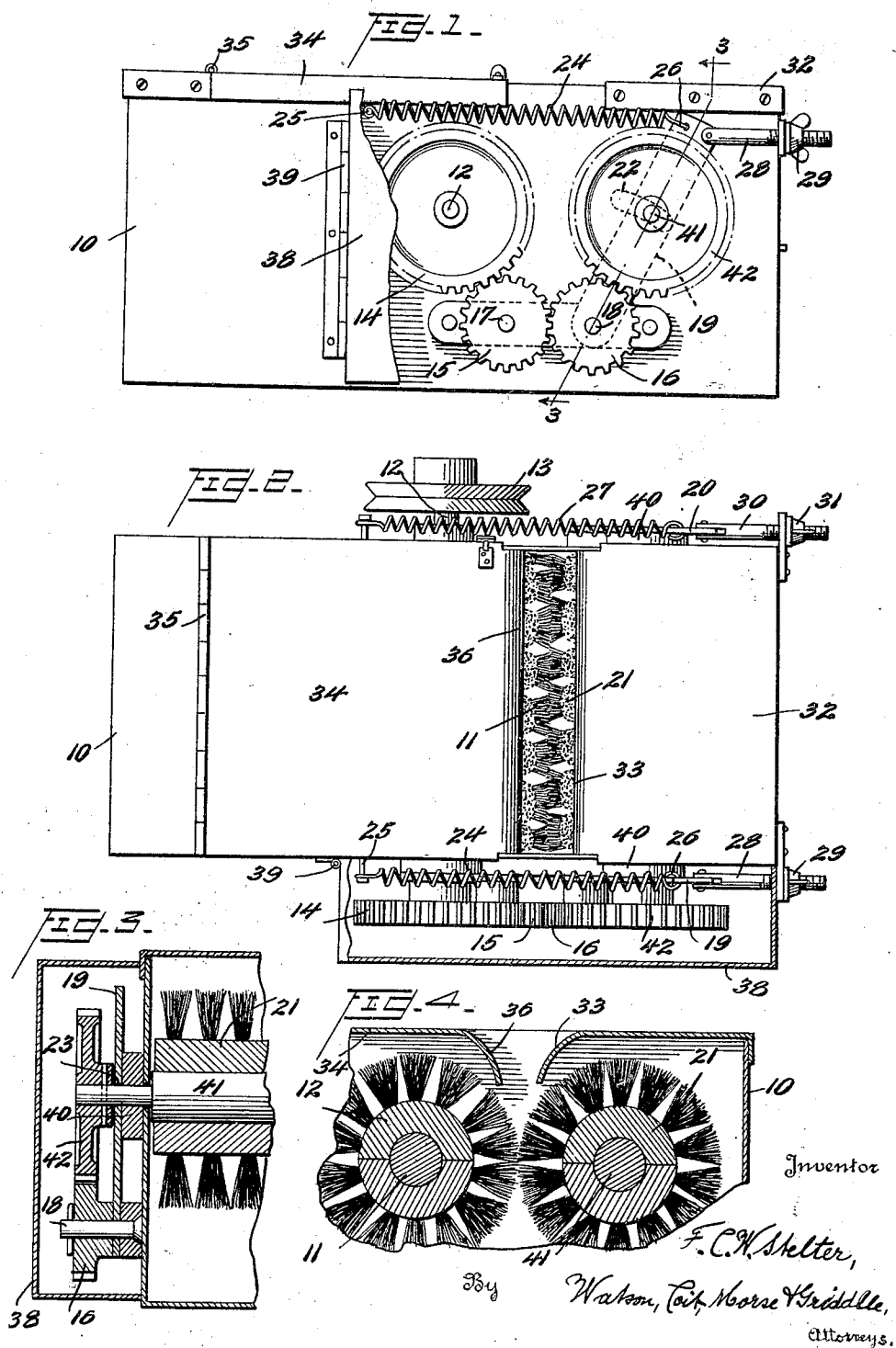


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F. C. W. STELTER
GLOVE CLEANING MACHINE
Filed May 29, 1922

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UNITED STATES PATENT OFFICE.

FRANCIS C. W. STELTER, OF LONG ISLAND CITY, NEW YORK.

GLOVE-CLEANING MACHINE.

Application filed May 29, 1922. Serial No. 564,656.

To all whom it may concern:

Be it known that I, FRANCIS C. W. STELTER, a citizen of the United States, residing at Long Island City, Queens County, State of New York, have invented certain new and useful Improvements in a Glove-Cleaning Machine, of which the following is a specification.

This invention relates to a device designed primarily for removing spots from the finger tips of gloves, due to perspiration or other causes, but it is also adapted for cleaning gloves in general. A device embodying it is very simple in construction and easily operated and may be made of such size as to be easily moved about and may be operated from any suitable source of power. It includes a receptacle or tank for the cleaning fluid and a pair of rotary cylindrical brushes making surface contact in the receptacle so connected that the meeting surfaces move downward and are at the upper portion of the receptacle above the liquid level and in convenient position to receive the glove to be treated from above between them. One novel feature is that one of the brushes is mounted on movable bearings so that it may move toward or away from the other brush and press to a greater or less extent on the glove caught between them and in yielding means tending to press the brushes together. The brushes are operatively connected together by gear wheels and idler gears on the outer side of the receptacle in a grease case and they serve to cause the brushes to rotate in opposite directions with the meeting surfaces moving down. Another novel feature consists in the cover for the receptacle composed of two sections spaced apart longitudinally a slight distance forming a narrow opening immediately above the meeting surfaces of the brushes with the edges of the opening turned downwardly close to the surface of the brushes so as to permit the glove to enter but prevent the brushes from throwing liquid upward out of the receptacle during rotation. The novel features will be more fully understood from the following description and claims taken with the drawings.

In the drawings:

Fig. 1 is a side view of a device embodying the invention with a part of the gear containing grease box broken away;

Fig. 2 is a plan view of the device with the grease box partly in section;

Fig. 3 is a section on the line 3—3 of Fig. 1 extending part way through the apparatus, and

Fig. 4 is a longitudinal vertical section through the top portion of the device showing the cover and brushes.

In the embodiment of the invention shown for purposes of illustration the receptacle or tank 10 is of rectangular shape and is adapted to contain a cleaning liquid which is normally kept at a level materially below the top of the receptacle. In this tank there is a cylindrical brush 11 mounted on a rotary shaft 12 which extends through the sides of the receptacle and is mounted in fixed bearings carried by the sides. The upper surface of this brush is near the top of the receptacle and the lower surface is below the normal fluid level in the receptacle. The projecting end of shaft 12 on one side of the receptacle has a drive pulley 13 which may be operated by a belt drive from any suitable source of power to cause the rotation of the shaft and brush. The end of shaft 12 projecting from the other side of the receptacle has mounted on it a gear wheel 14. Two idler gears 15 and 16 are mounted on fixed pivot bearings 17 and 18 connected to the side of the receptacle at a lower level than the gear wheel 14 and these two gears have their axes on the same horizontal plane and are in mesh with each other. The idler gear 15 is also in mesh with the gear wheel 14 of brush 11. Two upwardly extending members 19 and 20 which may be in the form of flat metal bars are pivoted to fixed pivot bearings at their lower ends on the outer sides of the tank in alignment with the axis of the idler gear 16 so that they may have swinging motion longitudinally of the tank on an axis coincident with the axis of the idler gear 16. A brush 21 which is of the same size as brush 11 is mounted on a shaft 41 which has portions extending through

arc-shaped slots 22 in the side walls of the receptacle 10 and have rotary bearing supports 23 in the arms 19 and 20 a sufficient distance from the lower ends of those arms to make the brush 21 occupy a position spaced the same distance from the upper end of the receptacle as the brush 11 and in use the surface of the brush 21 facing brush 11 is in contact with brush 11.

On the projecting end of shaft 41 carrying brush 21 and on the outer side of arm 19 there is a gear wheel 42 similar to the gear wheel 14 and it is in constant mesh with idler gear 16 in any and all positions of adjustment of brush 21 since its axis moves in the arc of a circle with the axis of gear 16 as its center. It is thus apparent that when power is applied through drive wheel 13 to turn brush 11 in a clockwise direction in the arrangement shown in Fig. 1 the brush 21 will by the connecting chain of gears be driven in an anti-clockwise direction. On each side of the receptacle 10 there is an elongated coiled spring one of which, 24, is connected at one end 25 to a fixed projection from the side of the receptacle and at its other end 26 to the upper end of the arm 19. The corresponding coiled spring 27 on the other side is similarly connected to a fixed part of the receptacle and to the upper end of member 20. These springs are under tension and tend to turn the arms 19 and 20 on their pivots pressing the brush 21 yieldingly against brush 11 with substantially uniform pressure and this furthermore serves to take up for any wear of the brushes. A short rod 28 is pivotally connected to the upper end of the arm 19 and passes through an opening at the end of the receptacle and has a thumb nut 29 on the outer side for regulating the movement of the arm 19 on its pivot. A similar rod 30 is pivotally connected to the upper end of arm 20 and has a similar thumb nut 31 for controlling its movement.

The cover for the receptacle preferably consists of two sections, the section 32 being in fixed position with side edges fitting around the outer surface of the receptacle and having its inner edge downwardly curved at 33 close to the surface of the brush 21. The section 34 has side flanges fitting the sides of the receptacle at the top and a hinge connection 35 to the receptacle near the end and its inner end opposite the end 33 of section 32 is curved downwardly at 36 leaving a narrow opening transverse of the receptacle immediately over the meeting surfaces of the brushes 11 and 21 so as to permit the passage of a glove downwardly between the edges to be gripped by the brush and cleaned. A grease box 38 open on one side is hinged on a vertical hinge 39 to the side of the receptacle on which the gear wheels on the ends of the brushes are

located and fits around those gear wheels and the idler gears 15 and 16 and the member 19 forming with that side of the receptacle an enclosed grease container for the gears. In order to prevent the fluid material in the receptacle from escaping through the arc-shaped slots 22 in which the shaft 23 moves, washers 40 surrounding the shaft 23 and moving with it may extend over the full length of the slot when the member 19 is in any position. There is, of course, a similar washer on the other side of the machine covering the other slot.

Although one specific embodiment of the invention is shown for purposes of illustration, it will be understood that it is not limited to the details of that form beyond what is indicated in the claims.

What I claim as my invention and desire to secure by Letters Patent is:

1. A glove cleaning device comprising in combination a receptacle for cleaning fluid, a pair of parallel rotary cylindrical brushes extending across said receptacle making longitudinal contact with each other, their upper surfaces being close to the top of said receptacle and their lower surfaces below the normal liquid level, a cover for said receptacle having a narrow opening in line with and directly above the meeting surfaces of said brushes its facing edges being formed by downwardly curved edge portions of said cover close to the surfaces of said brushes, and means for simultaneously rotating said brushes in opposite directions so that their meeting surfaces below said opening will move downward.

2. A glove cleaning device comprising in combination a receptacle for cleaning fluid, a pair of parallel rotary cylindrical brushes extending across said receptacle making longitudinal contact with each other, their upper surfaces being close to the top of said receptacle and their lower surfaces below the normal liquid level, a cover for said receptacle having a narrow opening in line with and directly above the meeting surfaces of said brushes its facing edges being formed by downwardly curved edge portions of said cover close to the surfaces of said brushes, and means for simultaneously rotating said brushes in opposite directions so that their meeting surfaces below said opening will move downward, one of said brushes being movable towards or away from the other and yielding means constantly tending to press it against the other brush and thumb screws for moving said brush.

3. A glove cleaning device comprising in combination a receptacle for cleaning fluid, a pair of parallel rotary cylindrical brushes extending across said receptacle making longitudinal contact with each other, their upper surfaces being close to the top of said

receptacle and their lower surfaces below the normal liquid level, a cover for said receptacle having a narrow opening in line with and directly above the meeting surfaces of said brushes its facing edges being formed by downwardly curved edge portions of said cover close to the surfaces of said brushes, gear connection between said brushes including two idler gears on the outer side of said receptacle causing said brushes to rotate in opposite directions, and means on the outside of said receptacle applied to one brush for causing continuous rotation of said brushes causing their meeting surfaces to move downward.

4. A glove cleaning device comprising in combination a receptacle for cleaning fluid, a pair of parallel rotary cylindrical brushes extending across said receptacle making longitudinal contact with each other, their upper surfaces being close to the top of said receptacle and their lower surfaces below the normal liquid level, a cover for said receptacle composed of two sections spaced apart longitudinally a short distance forming a narrow opening between them directly above the meeting surfaces of said brushes each section having a down turned end portion at said opening, and one of said sections having hinge connection with said receptacle near one end to give access to the interior, and means for so rotating said brushes that their meeting surfaces move downward.

5. A glove cleaning device comprising in combination a rectangular receptacle for cleaning fluid, a pair of parallel cylindrical brushes having surface contact mounted on rotary shafts extending through and projecting beyond the upper portion of the side walls of said receptacle, a pair of gear wheels mounted on the ends of said shafts projecting from one side of said receptacle, a pair of meshing idler gears in mesh with and operatively connecting said gear wheels, and

means on the end of one of said shafts projecting from the opposite side of said receptacle to continuously rotatively drive it.

6. A glove cleaning device comprising in combination a rectangular receptacle for cleaning fluid, a pair of parallel cylindrical brushes having surface contact mounted on rotary shafts extending through and projecting beyond the upper portion of the side walls of said receptacle, a pair of gear wheels mounted on the ends of said shafts projecting from one side of said receptacle, a pair of meshing idler gears in mesh with and operatively connecting said gear wheels and means on the end of one of said shafts projecting from the opposite side of said receptacle to continuously rotatively drive it, an enclosed grease box for said gear wheels, idler gears and the ends of the shafts at the side of said receptacle.

7. A glove cleaning device comprising in combination a rectangular receptacle for cleaning fluid, a pair of parallel cylindrical brushes having surface contact mounted on rotary shafts extending through and projecting beyond the upper portion of the side walls of said receptacle, a pair of gear wheels mounted on the ends of said shafts projecting from one side of said receptacle, a pair of meshing idler gears in mesh with and operatively connecting said gear wheels, and means on the end of one of said shafts, projecting from the opposite side of said receptacle, to continuously rotatively drive it, the said brush shaft having the driving means thereon being mounted in stationary bearings and the other brush shaft having bearing supports adapted to move in the arcs of circles having their centers on the center line of the axis of the idler gear in mesh with the gear wheel on that shaft.

In testimony whereof I hereunto affix my signature.

FRANCIS C. W. STELTER.