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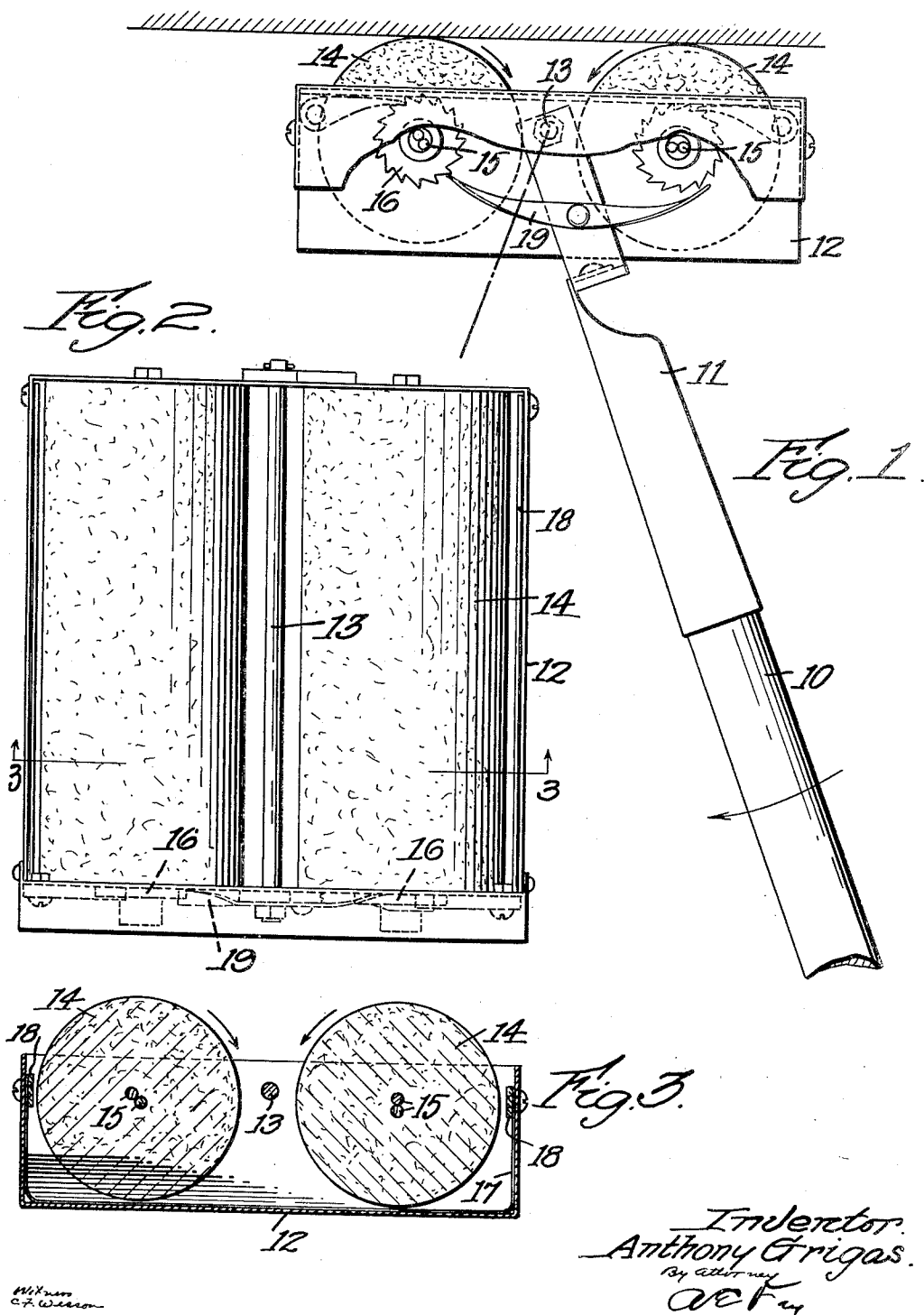
A. GRIGAS

2,187,585

CEILING WASHING IMPLEMENT

Filed Aug. 2, 1938

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2 Sheets-Sheet 2

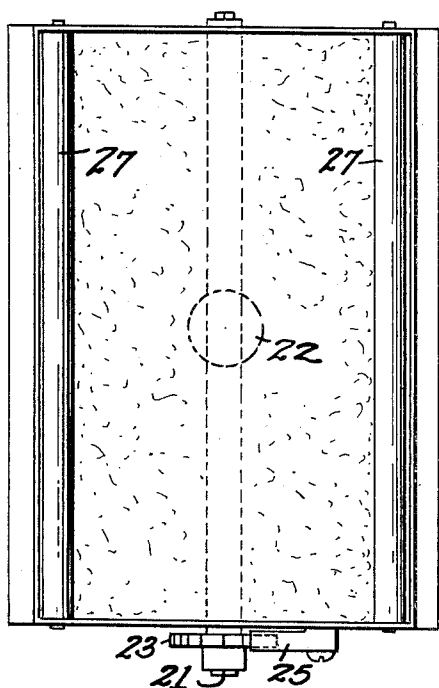


Fig. 5.

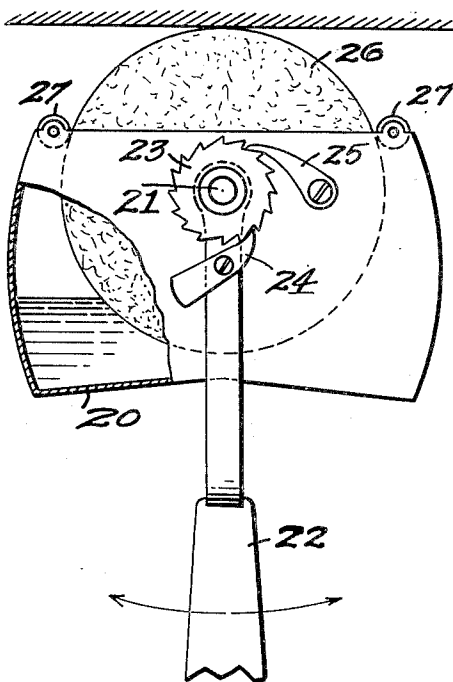


Fig. 4.

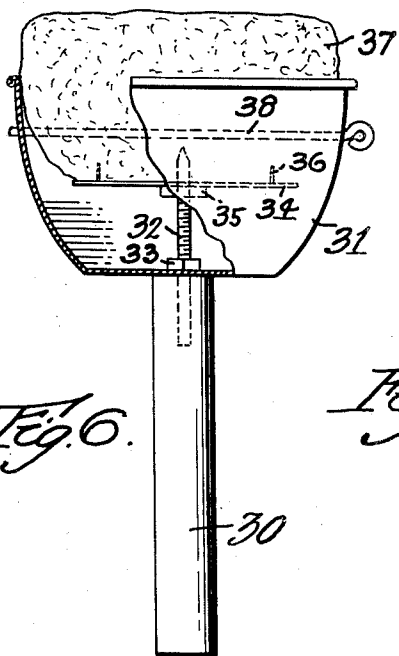


Fig. 6.

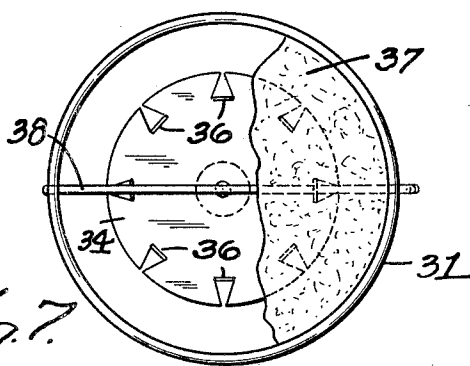


Fig. 7.

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CEILING WASHING IMPLEMENT

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3 Claims. (Cl. 15—131)

The principal objects of this invention are to provide a device adapted to be supported by a handle from below to be moved along in contact with the ceiling for washing it; to provide a device of this kind comprising a box for receiving particles that have to be removed by it from the ceiling, operated by a handle on a pivot on said box, said handle having means for turning a roll, which projects up from it against the ceiling; to provide for intermittently turning either one or two cylindrical brushes in contact with the ceiling while the implement is progressing along the ceiling; to provide means for preventing any liquid coming down from the ceiling to be dropped on the floor under ordinary circumstances; to provide means whereby the thin edges of the box cannot engage or scratch the ceiling, and to provide a form of device in which there is a vertically adjustable plate on which a sponge or the like is held, with means passing through the sponge for securing it in position in the box.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a side view of a preferred embodiment of the invention with parts broken away to show interior construction and showing it in use;

Fig. 2 is a plan of the same;

Fig. 3 is a sectional view on the line 3—3 of Fig. 2;

Fig. 4 is an end view of a modified form of the implement having the same principles, with parts broken away to show interior construction;

Fig. 5 is a plan of the same;

Fig. 6 is a side view of a third form of the invention with parts broken away to show interior construction, and

Fig. 7 is a plan of the same with part of the sponge broken away.

Referring to Figs. 1, 2 and 3, this implement is designed to be held up against the ceiling by means of a handle 10 in the form of a rod set into a conical socket 11. The socket is pivoted to a box 12 by a rod 13 extending centrally through the box from end to end. This is a box of any desired shape but shown substantially square. It is open at the top and is provided with a textile lining 17 held by bars 18 fixed inside. A pair of rolls 14, formed preferably of wool yarn, or the like, are mounted on wire shafts 15 which have loose bearings in holes in the frame. Two of these rolls are provided parallel with each other and, of course, on opposite sides of the rod 13.

At one end of the box there is a ratchet wheel 16 fixed on each shaft 15. On the socket 11 is pivoted a double ended pawl 19 engaging the two ratchets. It will be noticed that the teeth of these two ratchets point in opposite directions. One is left handed and the other right handed.

In operation, the handle is swung about its pivot while moving the box along to wash the ceiling. While the handle is moving in one direction, the pawl 19 engages the teeth in one ratchet wheel 16 and turns the corresponding brush 14 in one direction. It merely passes over the teeth on the other ratchet wheel and has no effect on that brush, which does not rotate at that instant. Immediately on the reversal of the motion of the handle the second brush will be turned as long as the handle is moving in that direction and the pawl will pass idly over the first ratchet wheel. The result of this is, not only to move the brush along the ceiling, but to rotate the brushes alternately and intermittently while it is moving, thereby removing dust, grime, and foreign particles that might lodge there. At the same time the second brush is moving over the ceiling in stationary position, as will be seen, and actually rubbing along the ceiling for the same purpose. This alternate action takes place as long as the brush is being used. Ordinary soapy water is located in the box 12 so that the two brushes absorb enough of it in their rolling action to perform an efficient washing operation.

In the form shown in Figs. 4 and 5 a box 20 is provided with a central shaft 21 extending from end to end on which the handle 22 swings while moving the device along. On the central shaft 21, which has a ratchet wheel 23 operated by a pawl 24, is pivoted the handle 22. As shown, a pawl 25 is pivoted on the box 20 to hold the ratchet wheel against turning in the opposite direction. The result of this construction is to provide an intermittent rotation of the brush 26 which is fixed on the shaft 21. At the top of the box 20 are a pair of longitudinal and marginal rubber rolls 27 to prevent the upper edges of the box from digging into the ceiling and marking or scratching it. The bottom of this box is shown elevated at the central part because the box swings more or less as it is being moved along the ceiling, with the handle oscillated more or less by the operator. In this case the action is not exactly the same as in the former case but the alternate rotation is obtained and the brush is moved along the ceiling while being prevented from rotating. The general objects are substantially the same as those shown in Figs. 1, 2 and 3.

In the form shown in Figs. 6 and 7 a vertical handle 30 is shown which is fixedly connected with a box 31 which, in this case, can be conveniently round. Into the end of the handle is fixed a screw 32 inside the box and held by a check nut 33. This screw projects directly upwardly in the center of the box 31. On this screw is mounted screw threadedly a plate 34 having a nut 35 which cooperates with the screw. This is for the purpose of raising and lowering the plate 34 to adjust it to whatever brush happens to be in use. This plate is formed of sheet metal with teeth 36 punched out to permit them to project upwardly.

In the use of the device, the plate is adjusted to the desired height and a sponge 37 is pressed down on the plate and held very well thereon by the projection into it of the teeth 36. Of course, if the sponge were allowed to turn in this device it would vary its elevation therein, which is not desired. Through the opposite sides of the box are formed holes and through these holes a diametrical pin 38 is passed, extending through the sponge so as to hold the sponge against turning and dropping out of the device. Of course, this device is intended for the reception of water in the bottom so that the water will come above the plate where it will be readily taken up and absorbed by the sponge for the same use as the other forms of the invention shown herein. In this case there is no rotation of the sponge but the work has to be done by the operator by manipulation of the handle. There is no special means for holding the pin in position as it passes through the sponge which furnishes enough resistance against its accidental removal.

The invention is presented, in the three forms shown, to constitute an advantage over the present ceiling brush used. The first two forms permit of the rotation of the soft brushes, made of wool yarn, rags, or any other absorbent material, by moving along the surface of the ceiling. The brushes in the first form alternately press against the ceiling and turn. Two forms of cleaning are employed, brushing by an otherwise stationary surface and the rotating, but not rolling, of a corresponding surface along the ceiling. Each of these is performed for a short time and alternately. There is very little danger of the water being spilled over the top. The water can be emptied and the container can be filled very easily.

In the second form shown the rubber rollers prevent contact of the edges of the box against the ceiling, which is not employed in the form shown in Figs. 1, 2 and 3, because two brushes are employed. The alternate rotation and stopping of the brushes is performed by the handle and without displacing the cleaning device on the ceiling. Ordinarily, it is moved the whole length or width of the ceiling by constant vibration of the handle.

In the form shown in Figs. 5 and 6 the expense is reduced to practically a minimum and the adjustment of the sponge is secured with very little trouble and it is held securely in place by an inexpensive construction.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. In a ceiling cleaning device, the combination of a horizontal box open at the top, a pair of parallel shafts carried by said box, a roller fixed to each shaft and projecting equally above the box so as to be adapted to come into contact with the ceiling and prevent the box from engaging the ceiling under all conditions, a pair of ratchets having their teeth extending in opposite directions, one fixed on each shaft, a downwardly extending central handle pivoted to the box for supporting it, a double pawl pivoted on the handle and having an operating tooth projecting in each direction into contact with the separate ratchet wheels, whereby, when the handle is swung back and forth along its pivot and advanced along the ceiling, first in one direction and then the other, first one brush and then the other will be rotated and will be prevented from rotation at intermittent times.

2. A device for cleaning ceilings comprising a horizontal box, a shaft having loose bearings in the ends of the box and extending through it, a textile roller mounted on said shaft, a ratchet wheel carried by the shaft, a central handle pivoted to the box and extending downwardly for supporting it, said handle being movable back and forth about its pivot while the box is being advanced along the ceiling and supported by the hand, and a pawl engaging said ratchet wheel and turning it by the motion of the handle in one direction and moving back idly in the other direction, whereby the rotary brush will rotate in contact with the ceiling intermittently and between rotations will be moved along the ceiling without rotation.

3. In a ceiling cleaning device, the combination of a horizontal box open at the top, a central roller projecting above the box so as to be adapted to come into contact with the ceiling, a pair of soft longitudinal rolls projecting above the side edges of the box to prevent the box from engaging the ceiling under all conditions, a ratchet fixed on the shaft of the roller, a downwardly extending handle pivoted to the box at its center to support the box in equilibrium, a pawl pivoted on the handle and having an operating tooth projecting into contact with said ratchet wheel, whereby, when the handle is swung back and forth along its pivot and advanced along the ceiling, first in one direction and then the other, the brush will be rotated and will be prevented from rotation at intermittent times.

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