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M. MERNIT

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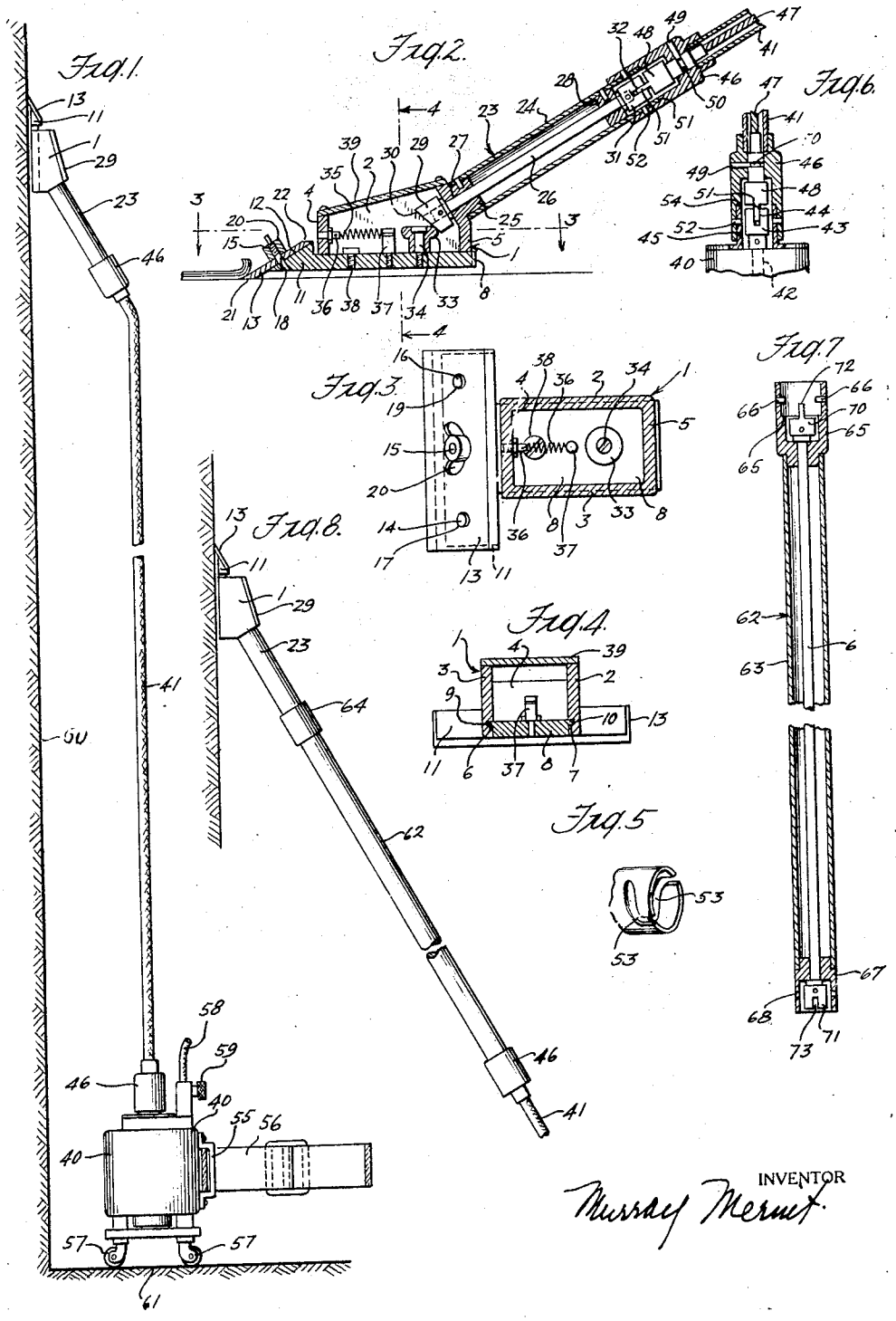

INVENTOR

Murray Mernit.

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MURRAY MERNIT, OF NEW YORK, N. Y., ASSIGNOR OF ONE-TENTH TO ADOLPH FRIEDRICH, OF NEW YORK, N. Y.

SCRAPING DEVICE.

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This invention relates to scraping devices and more particularly to those power driven scrapers used for the removal of wall paper. The object of my invention is to provide a practical power driven wall paper removing device which is efficient in operation, simple in construction, light in weight so as to make it labor saving in operation and transportion. The device consists of a hand operated tool which carries a power driven reciprocating blade or scraper. To make this hand operated tool light in weight a power unit actuates the scraper through a light flexible shaft of sufficient length to allow the operator freedom of movement. By this arrangement the tool is light in weight and easy to manipulate because the power mechanism which is usually of some weight is not carried in the tool.

The tool is manipulated in the same manner as an ordinary scraper. The operator inserts the cutting edge of the blade or knife under the edge of the wall paper and moves forwardly the blade augmenting this forward movement by rapidly reciprocating in the same direction, thus effecting a more rapid and efficient stripping or scraping of paper from the wall.

In my invention it is advantageous to automatically prevent the reciprocation of the blade during the backward strokes of the tool or when the same is not being momentarily used thus reducing the wear of the moving parts and reducing the amount of vibrations which have a tiring effect upon the arm of the operator.

My preferred power unit is a light electric motor which may be carried upon the body of the operator or rested upon the floor. When placed upon the floor it is advantageous to mount the same upon rollers, so that it can be readily moved from place to place as the work progressses. The current for the motor may be supplied through any convenient cable.

For the purpose of removing the wall paper which is normally beyond the reach of the operator, I provide a detachable extension or elongated handle for the tool to enable the operator to reach such wall paper.

I have provided readily detachable connections between the motor, the tool and the cable to permit the changing of parts, to facilitate the transportation of the device and to permit the ready attachment of the elongated handle between the tool and the flexible driving connection whenever necessary.

Other objects and advantages will hereinafter appear. Referring to the drawings:

Fig. 1 illustrates the application and use of my device for removing paper from the wall.

Fig 2 is a sectional view of the scraping tool.

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

Fig. 4 is a section on line 4—4 of Fig. 2.

Fig. 5 is a fragmentary detail perspective view showing a part of the detachable connections between the motor and the cable and between the cable and the tool.

Fig. 6 is a sectional view of the detachable connection between the motor and the cable.

Fig. 7 is a longitudinal sectional view of the elongated handle.

Fig. 8 is an assembled elevational view showing the elongated handle in use.

Referring to Figs. 1, 2 3 and 4 the scraping tool comprises a rectangular body or casting 1 having an open top and bottom and having side walls 2 and 3 extending beyond the front and rear walls 4 and 5. The extensions of the side walls carry grooves 6 and 7 upon their inner faces. These grooves serve to guide a slide or reciprocating plate 8 having tongues 9 and 10 engaging respectively the grooves 6 and 7 (Fig. 4). The slide closes the bottom of the body 1 and carries an integral extension 11 projecting beyond the front wall 4 (Fig. 3), which extension carries an inclined face 12.

The extension 11 and its inclined face 12 are of greater width than the part of the slide engaged by the grooves as illustrated in Fig. 3, so as to carry a wide knife or scraper blade 13. This knife is accurately positioned upon the inclined face 12 by pins 14, 15 and 16 secured in the extension 11 and snugly engaging openings 17, 18, and 19, in the knife 13. A thumb nut 20 threaded upon the extended center pin 15 serves to removably secure the blade upon the face so that blades may be readily interchanged.

The knife or scraper has two cutting edges formed by beveled faces 21 and 22 so that either edge may be used when the other is dulled. The forward cutting edge of the blade and its face 21 extend, as will be noted from Figs. 1 and 2, beyond the lower sur-

face of the slide. The beveled face 21 of the blade is parallel to the outer surface of the slide and serves to space the tool from the wall of the room and also serves to guide the same.

The body portion is provided with a handle 23 by which the scraping device is manipulated. This handle comprises a tube 24 securely fitted over an integral collar 25 which projects from the rear wall 5 at an angle to the slide 8, as shown in Figs. 1 and 2.

A shaft 26 is journaled in an opening 27 in the rear wall 5 and in the handle 23 by means of a collar 28 rigidly secured therein.

The ends of the shaft, Fig. 2, extend beyond their bearings and one end carries within the body 1 a cam 29 having a cam surface 30 and the other end carries within the end of the handle a clutch member 31 having a slot 32. The cam 29 and the clutch member 31 are rigidly secured to the shaft adjacent the bearings to hold the shaft against endwise movement.

The cam face 30 of the cam 29 is adapted to be engaged by a follower 33 rotatably mounted upon a vertical stud shaft 34 secured into the upper face of the slide as shown in Figs. 2 and 3. When the shaft 26 is rotated its cam 29 will cause the slide 8 to reciprocate by reason of the cam face 30 acting upon the follower 33.

The slide is normally urged forward towards the front wall 4 by a spring 35 so as to move the follower 33 out of the range of cam face and thus prevent the reciprocation of the slide. The tension spring 35, Figs. 2 and 3, is attached at one end to a post 36 secured to the front wall 4 and the other end is secured to a post 37 threaded into the inner face of the slide 8. The movement of the slide under the tension of the spring is limited by a screw 38 threaded into the inner face of the slide and is adapted to abut against the inner face of the front wall 4 when the follower 33 has been moved beyond the range of the cam face 30.

The open top of the body 1 is closed by a removable cover 39 secured by screws to the walls in order to protect the moving parts from dust and grit and to form an oil chamber as shown in Figs. 2 and 3.

The shaft 26 is driven preferably by an electric motor 40 through a flexible cable 41 of substantial length as shown in Fig. 1. The shaft 42, Fig. 6, of the motor carries securely a clutch member 43 having a slot 44, and the hub of the motor frame carries fixed thereto a sleeve 45 of the same diameter as the tube 24 which forms the handle 23. The ends of the cable, Figs. 1, 2 and 7, carry securely sleeves 46 which fit over the end of the handle 23 and over the sleeve 45 secured to the motor 40. The cable 41 loosely houses a flexible shaft 47 the ends of which are rigidly connected to clutch members 48 rotatably mounted in the sleeves 46. The members 48 are held against longitudinal movement by pins 49 fixed in the sleeves 46 and engaging grooves 50 in the members 48. The members 48, Figs. 2 and 6 carry tongues 51 one of which detachably engages the slot 32 in the clutch member 31 and the other of which detachably engages the slot 44 of the clutch member 43. Through these connections the motor drives the shaft 26.

The sleeves 46 are detachably connected to the handle and the motor by pins 52 in the sleeves engaging bayonet slots 53, Fig. 5, in the end of the handle 23 and in the sleeve 46 of the motor. The sleeves 46 carry internal shoulders 54 which abut against the ends of the handle 23 and of the sleeve 45 when the sleeves 46 are turned so that their pins 52 engage and bind in the inclined and bent portions of the bayonet slots and thus cause the shoulders 54 to firmly abut against end of the handle 23 and end of the sleeve 46.

The electric motor 40, Fig. 1, in order to be carried upon the body of the operator, is provided with a metal strap 55 through which passes a belt 56 to be secured about the waist of the operator. The motor is also provided with rollers 57 so that it may readily be moved about by the operator. A current carrying cable 58 with a switch 59 may be provided for controlling the motor.

Fig. 1 illustrates my device ready for use with the tool placed against a wall 60 and the motor 40 resting upon a floor 61. The tool is then moved forward or upward in the same manner as an ordinary scraper by means of the handle 23, with the blade 13 inserted underneath the edge of the lowermost layer of wall paper as illustrated in Fig. 2.

The forward or upward movement of the tool and the resistance of the wall paper will move the slide 8 against the tension of the spring 35 and thus cause the follower 33 to be actuated by the cam face 30 of the revolving cam 29 as shown in Fig. 2. At each rearward movement of the slide the high part of the cam 30 will thrust the slide forward thus augmenting the forward movement of the tool and effecting a more rapid and efficient removal of wall paper by reason of the rapidly reciprocating blade 31, cutting, and scraping the paper from the wall. When this forward movement ceases the spring 35 will move the slide forward and thus move the follower 33 out of range of the cam face 30 and prevent the reciprocation of the slide.

Therefore during the backward strokes of the tool and during momentary halts in the work the slide will not reciprocate thus reducing the wear of the parts and reducing the vibrations which would have a tiring effect upon the arm of the operator.

It will be noted that the tool is lightly and simply constructed and driven by a light flexible shaft for the purpose of providing a labor saving device. In order to produce a better contact between the knife 13 and the wall, the operator presses with his free hand upon the cover of the device which is arranged for that purpose. The beveled face of the knife 13 serves to guide the tool and the operator may change the relation of the cutting edge of the blade to the wall by moving the handle 23 to or from the wall.

This device may also be used for the removal of other materials from the walls such as paint and fabric any may also be used for scraping other surfaces than walls.

To extend the upward range of the tool in order to remove the wall paper normally out of the reach of the operator I provide an elongated handle 62, Figs. 7 and 8, which can be readily attached and detached to the handle 23 of the device.

This handle consists of a tube 63, Fig. 7, rigidly carrying at one end a sleeve 64, corresponding in construction to sleeves 46, having an internal shoulder 65 and pins 66. The other end of the tube carries a sleeve 67 resembling the end of the handle 24 and having bayonet slots 68. The sleeves 64 and 67 rotably support an elongated shaft 69 which carries at its ends, inside of the sleeves 64 and 67, clutch members 70 and 71, respectively. The clutch member 70 carries a tongue 72 and the clutch member 68 carries a slot 73. To attach this elongated handle to the handle 23 the sleeve 46 of the flexible cable 41 is first detached from the handle 23 and attached to sleeve 67 so that the clutch members 48 and 71 engage and the pins 52 engage the bayonet slots 68. Then the sleeve 64 of the elongated handle 59 is slipped over the end of the handle 23 with the clutches engaging and its pins 66 binding in the bayonet slots 53. In this way this extension serves as a handle and also as a transmitter of the power as shown in Fig. 8.

It will be noted that the connections between the handle 23 and the cable 41, the cable 41 and the motor 40 are readily detachable to permit the changing of parts. These connections also permit the ready incorporation of the elongated handle.

It is understood that the form and construction of the device may be varied without departing from the spirit and the scope of my invention as defined in the following claims.

What I claim is:

1. In a scraping device the combination of a body portion, a handle attached to said body portion by which same is manipulated, a reciprocal slide carried by said body portion, a cutting edge carried by said slide, a constantly rotating shaft journaled in the body portion, a cam carried by the shaft, a follower mounted upon the slide and adapted to be actuated by the cam so as to cause the slide to reciprocate, a means constantly acting upon the slide to move the follower out of the range of the cam.

2. In a scraping device the combination of a body portion, a reciprocal slide carried by said body portion, a cutting edge carried by said slide, a rotating shaft journaled in said body portion, coacting means upon the shaft and upon the slide for causing the shaft to reciprocate the slide, a means acting upon the slide to normally prevent the first said means from reciprocating the slide.

3. In a scraping device the combination of a body portion, a reciprocal slide carried by the body portion, a cutting edge carried by the slide, a rotating shaft carried by the body portion, coacting means upon the slide and shaft for causing the slide to reciprocate, means for normally preventing the reciprocation of the slide.

4. In a scraping device the combination of a body portion, a reciprocal slide carried by said body portion, a cutting edge carried by the slide, a rotating shaft journaled in the body portion, a cam carried by the shaft, a follower carried by the slide and adapted to be engaged by the cam to reciprocate the slide, a spring acting upon the slide to move the follower out of the range of the cam.

5. In a scraping device comprising a body portion having an open top and bottom and having side walls extending beyond the front and rear walls, grooves cut into the extensions of the side walls, a slide closing the bottom of the body portion guided by the grooves and having an extension projecting beyond the front wall, a knife carried by the extension, a follower carried by the slide, a handle carried by the rear wall of the body portion by which the same is manipulated, a rotatable shaft journaled in the handle and rear wall of the body portion, a cam carried by the shaft for actuating the follower, and a cover for closing the top of the body portion and for forming a rest for a hand of the manipulator.

Signed at New York city in the county of New York and the State of New York, this 6th day of July, 1926.

MURRAY MERNIT.