

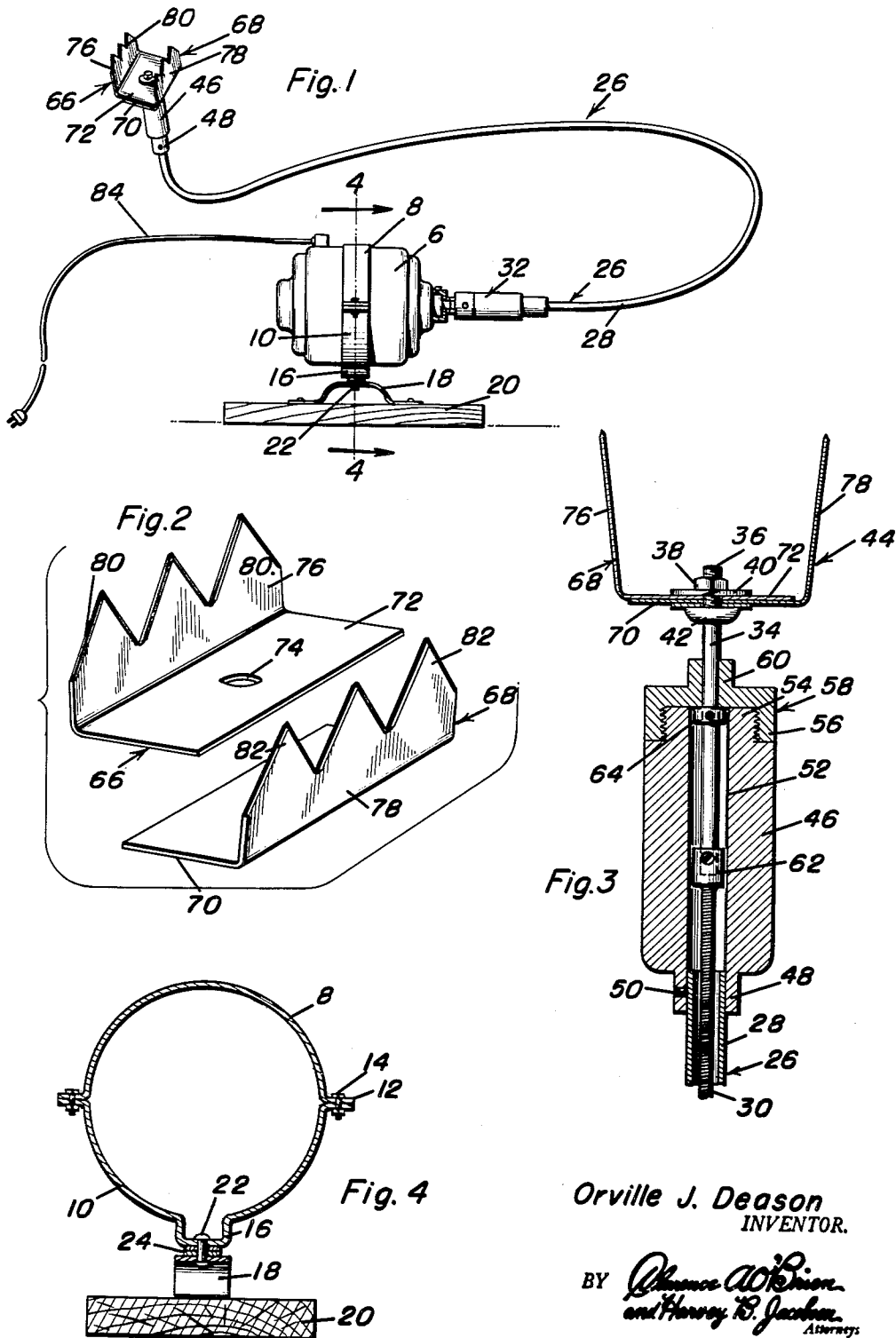
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PLASTER SCARIFYING AND REMOVING DEVICE

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PLASTER SCARIFYING AND REMOVING DEVICE

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3 Claims. (Cl. 262—26)

The present invention relates to a specially constructed and special purpose device or implement which is expressly, but not necessarily, constructed and designed to enable a user thereof to merely scarify and roughen up the surfaces of a plaster wall or, alternatively, to disintegrate and gouge out the plaster in a manner to completely remove the wall for replacement by a new wall.

Procedures and structural devices now in vogue for attainment of similar accomplishments are time-consuming, laborious, to say the least, and expensive. Confronted with the problem involving these difficulties and delays, it is the obvious purpose of the matter at bar to solve the problem and to do so primarily through the medium of a relatively simple, practicable and handily used device which does a good job with a minimum amount of time and effort involved and which, in actual practice, meets the respective requirements of manufacturers and needs of users.

Briefly summarized, the general concept of the invention has to do with a novelty structural device which is characterized by a flexible shaft, a portable electric motor having operating and driving connection with one end of the shaft, there being a rigid arbor operatively mounted on the other end of the shaft, handle means cooperable with the arbor, and a cutter head operatively mounted on the working end of the arbor, said head being constructed chiefly of a pair of complementary, readily applicable and removable parts or members.

More specifically, the invention has to do with a motor which is harnessed by swivel means on a portable base, providing a handy shiftable arrangement, the aforementioned cutter head and flexible shaft means between the cutter head and shaft portion of the motor being novel.

In carrying out a preferred embodiment of the invention, a hollow handle provides a bore for passage of the arbor and said handle or hand-grip, as it is sometimes called, being provided with a screw cap having a bearing for the arbor, the adjacent end of the arbor projecting beyond the bearing to accommodate the sections of the cutter head.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying sheet of illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is an elevational view of a device constructed in accordance with the principles of the present invention;

Figure 2 is an exploded perspective view, on an enlarged scale, of the parts which go to make up the cutter head;

Figure 3 is a view on an enlarged scale in section and elevation showing the hand-grip cutter head and associated structural features; and

Figure 4 is an enlarged section on the vertical line 4—4 of Figure 1 looking in the direction of the arrows, with the motor omitted.

The electric motor is denoted by the numeral 6 and it is conventional and it is harnessed in embracing and harnessing means comprising a pair of semicircular bands or

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half-sections 8 and 10 which embrace the motor casing and have laterally directed end portions 12—12 separably bolted together at 14. The lower band or half-section has a central U-bend 16 (see Fig. 4) which cooperates with a U-shaped bracket 18 bolted on a portable wooden base 20, the parts 16 and 18 being swivelly joined together by a pin 22 and cooperating spacing and wear-resisting washers 24.

The shaft is denoted generally by the numeral 26 and it comprises an outer flexible casing 28 and the internal shaft proper 30. This shaft means is secured by an appropriate motion transmitting coupling 32 to the motor shaft. There is a rigid extension 34 secured to the outer end of the flexible shafts 30 as shown in Figure 3, which is here referred to as an arbor. The outer end of the arbor is reduced and screw threaded as at 36 to accommodate a nut 38, washer 40 and shoulder 42 which features, in turn, serve to properly mount the readily applicable and removable cutter head 44. Before discussing further the cutter head, attention is directed to the hollow handle or hand-grip 46 which is provided with a neck 48 at one end and fastened at 50 to the casing 28. The driven shaft passes through the axial bore 52 and the grip terminates in a reduced screw threaded portion 54 which accommodates the rim 56 of the detachable cap 58 which latter is provided with a bearing 60 for the projecting end portion of the arbor.

The features 46 and 58 go to make up a hand-grip and the bore accommodates the coupling means 62 between the flexible shaft and arbor, and the arbor is also provided with a stop collar 64 which bears against the bearing to maintain the desired grouping and assembling of parts.

The cutter head is actually made up of a pair of substantially duplicate sections or parts. Each part is of general elongate L-shaped form which is denoted by the numeral 66 on the one hand, and 68 on the other. Each part comprises flanges, one flange being denoted at 70, the other at 72, and both flanges having holes 74 to accommodate the screw threaded extension 36 and nut and washer means appearing in Figure 3. The lateral outstanding or upstanding flanges 76 and 78 are serrated to provide cutting teeth. These are conveniently referred to as saw teeth and they are denoted by the numerals 80 and 82, respectively. Thus, these saw tooth blades 76 and 78 are disposed in opposed spaced parallelism to provide the desired scarifying and gouging and similar disintegrating results. The device may be used, in an obvious manner, by placing the wooden base 20 on a bench, stepladder, floor or any convenient support. By plugging in the current conducting wire 84 and turning on the switch (not detailed) the device is ready to operate. The motor drives the shaft means and the shaft means drives the arbor and the arbor turns the cutter head while the cutter head is held in the desired cutting position against the work surface and is moved handily about. Actual experience has shown that it is possible to completely remove the walls in the average five-room house within a period of approximately ten hours. In practice, the L-shaped units or sections 66 and 68 are bolted on the arbor so that the flanges 70 and 72 overlap and so that the blades 76 and 78 are in spaced apart relation, forming a sort of an open-ended trough which conveniently collects and disposes of the cuttings in a seemingly obvious manner.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. For use in handily scarifying the surface of a plaster wall or, alternatively, disintegrating and completely breaking up and wholly removing said wall, in combination, a flexible motion transmitting shaft, an arbor operatively mounted on one end of said shaft, a cutter head embodying a pair of complementary parts each of elongate form and L-shaped in cross-section and embodying an attaching flange and a companion serrated flange providing a saw-tooth blade, the respective flanges overlapping each other and the respective blades being cooperatively interrelated in spaced parallelism, said arbor being positively connected at one end to predetermined portions of the overlapped flanges, and a hand-grip operatively associated with said arbor, said hand-grip having an axial bore providing a passage for said arbor, and also having a bearing for said arbor.

2. For use in handily scarifying the surface of a plaster wall or, alternatively, disintegrating and completely breaking up and wholly removing said wall, in combination, a flexible shaft adapted to be operatively connected with a source of power, an arbor operatively mounted on one end of said shaft, a cutter head embodying a pair of complementary parts each of which is of elongate L-shaped form in cross-section and each embodying complementary laterally disposed flanges, there being a pair of attaching flanges which are in overlapped relation, and outstanding serrated flanges which later are in spaced apart parallelism so that when said parts are in cutting relationship an open-ended trough-like head is had, a hand-grip associated with said arbor, said hand-grip having an axial bore providing a passage for said arbor, said hand-grip further having a bearing for a complementary portion of said arbor, and

means removably mounting the overlapped flanges on one end of said arbor.

3. For use in handily scarifying the surface of a plaster wall or, alternatively, disintegrating and completely breaking up and wholly disposing of the removed wall portions, a device comprising, in combination, a flexible shaft having a rigid arbor coupled to one end of said shaft, a tubular hand-grip provided with a bore, said arbor passing through said bore, one end of said hand-grip having a bearing and the adjacent end of said arbor being rotatable in and projecting beyond said bearing, the last named end of arbor having a screw threaded terminal, a cutter head, said cutter head embodying a pair of substantially L-shaped parts, said parts being of substantially duplicate form and having overlapping apertured flanges and outstanding spaced parallel flanges, edge portions of the latter flanges being provided with saw-type cutting teeth, the threaded terminal of said arbor passing through the apertures in said apertured flanges, and an assembling and retaining nut mounted on said threaded end and securing said overlapping flanges to said arbor.

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