

Aug. 17, 1965 **T. N. BASKETT** **3,200,656**
MOUNTING APPARATUS FOR TRAVELING, STRUCTURAL-
SURFACE-PROCESSING APPLIANCES
Filed May 22, 1963 4 Sheets-Sheet 1

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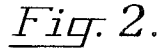


Fig. 1.

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4 Sheets-Sheet 2

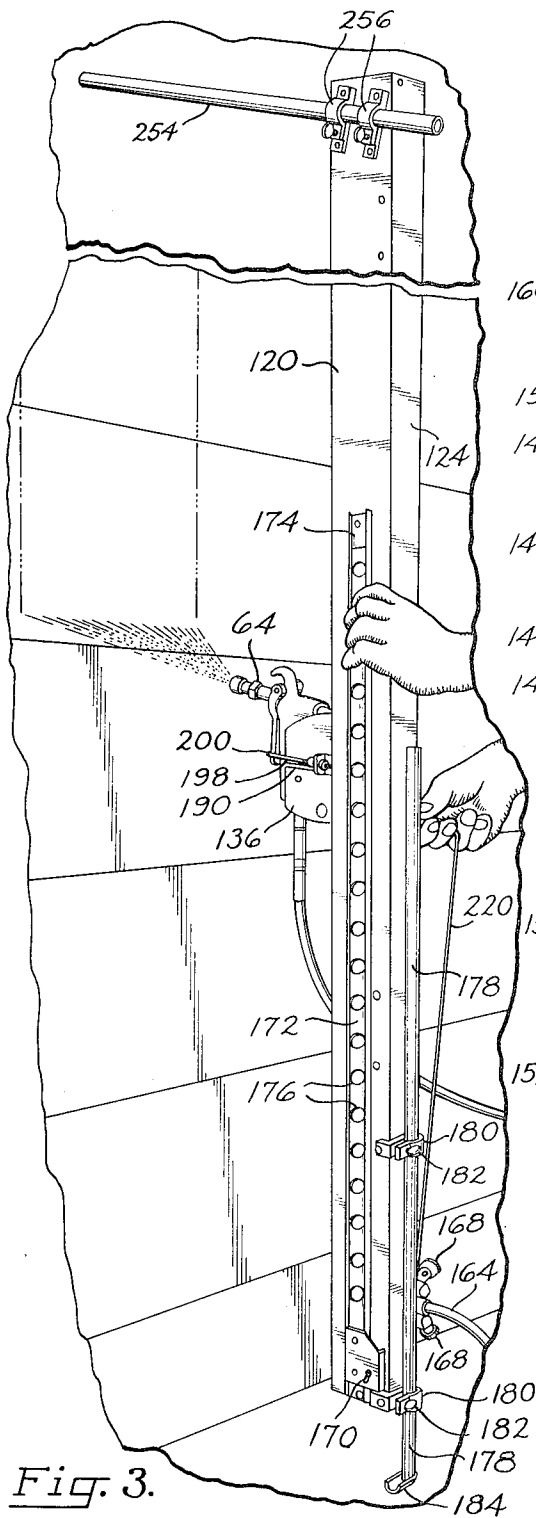


Fig. 3.

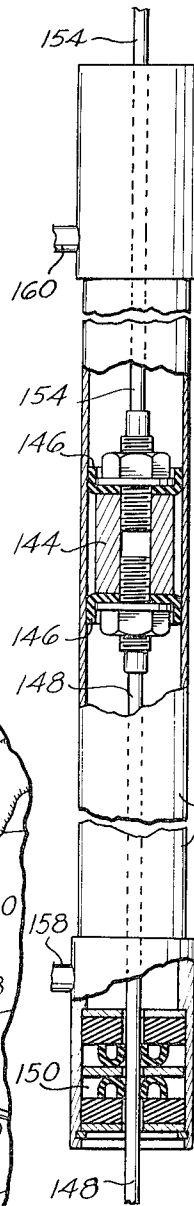


Fig. 7.

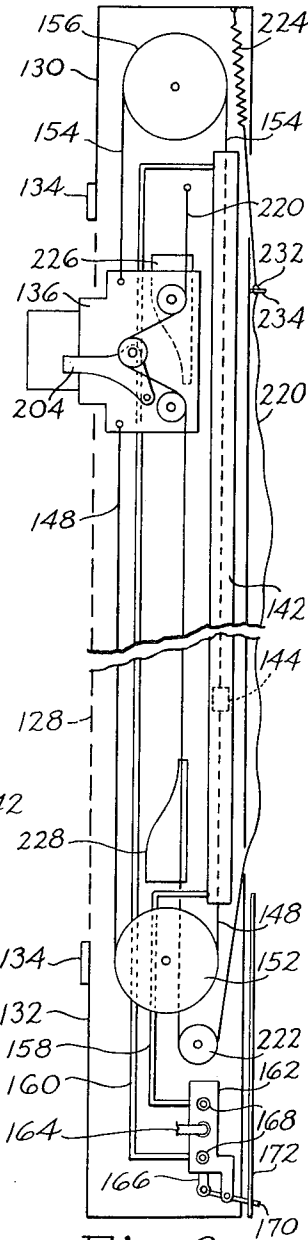


Fig. 8.

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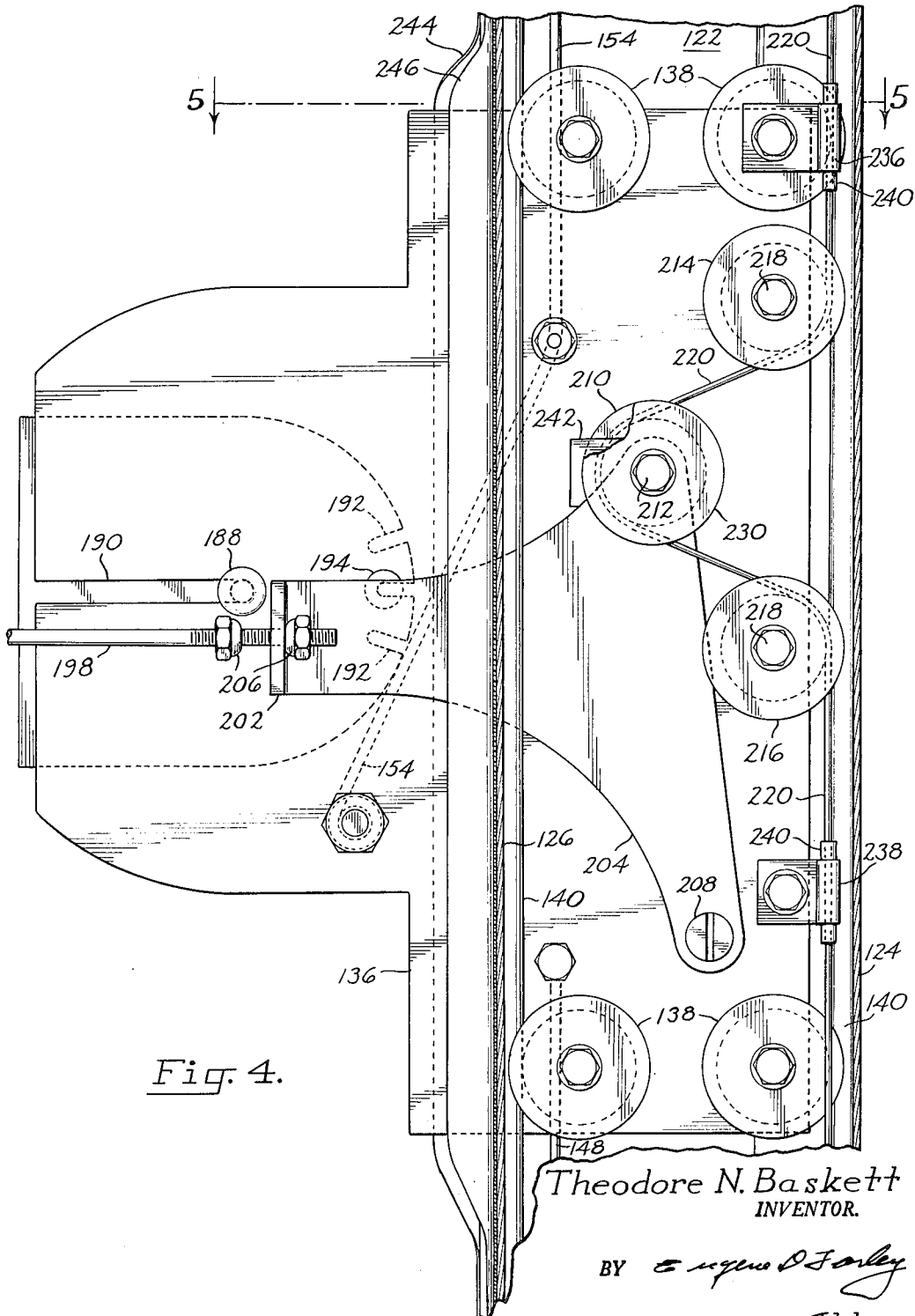
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3,200,656

Filed May 22, 1963

4 Sheets-Sheet 3



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4 Sheets-Sheet 4

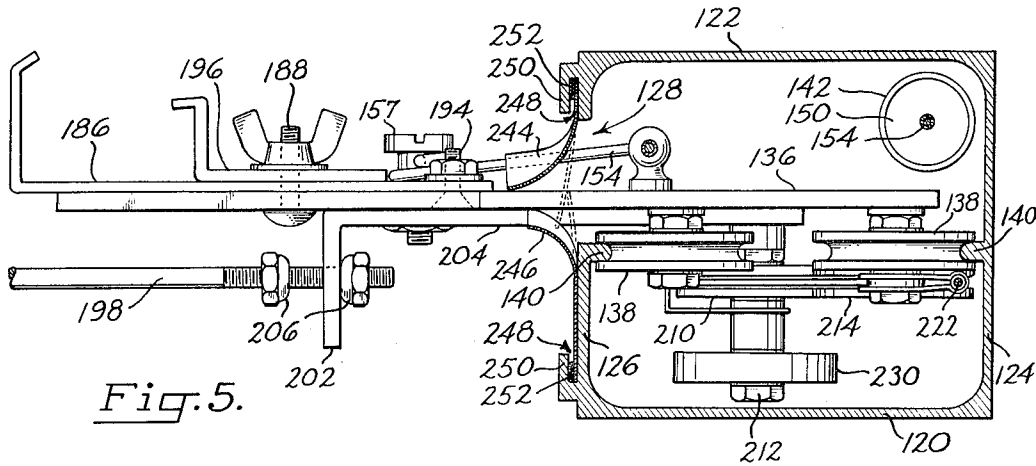


Fig. 5.

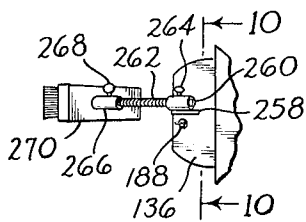


Fig. 9.

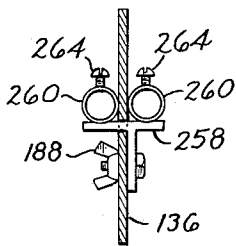


Fig. 10.

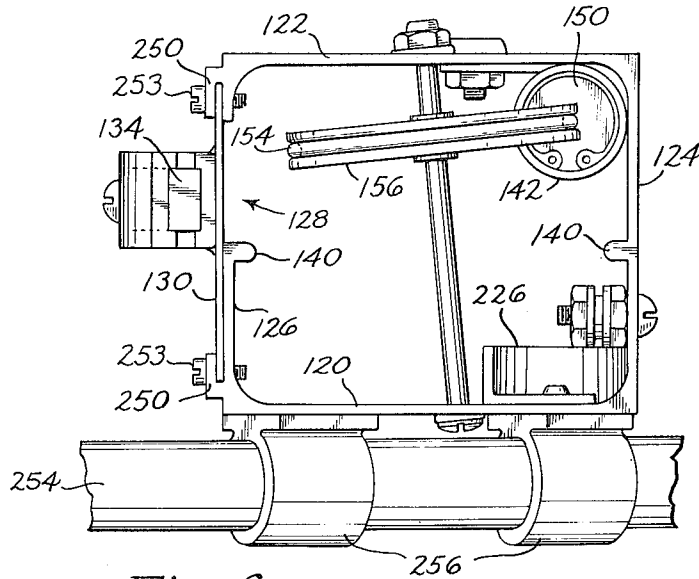


Fig. 6.

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1

3,200,656

MOUNTING APPARATUS FOR TRAVELING, STRUCTURAL - SURFACE - PROCESSING APPLIANCES

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Filed May 22, 1963, Ser. No. 282,489

12 Claims. (Cl. 74-95)

This invention relates to mounting apparatus for traveling spray guns, brushes and other surface-processing appliances.

This application is a continuation-in-part of my parent application, Serial No. 167,720, filed Jan. 22, 1962, now abandoned.

It is the general object of the present invention to provide apparatus for mounting spray guns, brushes, hydraulic jet cleaners or other appliances so that they may be used effectively for coating or cleaning various types of inaccessible structural surfaces.

A specific object of the present invention is the provision of apparatus for mounting traveling, power driven appliances in such a manner that they can be operated by remote control, stopped at any point in their travel, and applied to curved or flat inaccessible surfaces from a remote location without the use of scaffolding.

FIG. 1 is a foreshortened view in side elevation, partly broken away and partly in section, of the herein described mounting apparatus;

FIG. 2 is a transverse sectional view taken along line 2-2 of FIG. 1;

FIG. 3 is a foreshortened perspective view of a modified form of mounting apparatus embodying features of the present invention;

FIG. 4 is a fragmentary sectional view in side elevation showing details of construction of the carriage component of the apparatus;

FIG. 5 is a sectional view taken along line 5-5 of FIG. 4;

FIG. 6 is a top end view of the apparatus as viewed from the top in FIG. 3;

FIG. 7 is a foreshortened view in side elevation of the drive motor component of the apparatus, parts being broken away to disclose details of internal construction;

FIG. 8 is a foreshortened view in side elevation showing the assembly schematically to illustrate the operation of the apparatus;

FIG. 9 is a fragmentary side elevation of an alternate form of appliance holder; and

FIG. 10 is a sectional view taken along line 10-10 of FIG. 9.

Broadly stated, the mounting apparatus of my invention comprises an elongated frame, a carriage mounted in the frame for longitudinal reciprocation, reciprocating drive means connected to the carriage, and securing means on the carriage for securing a spray gun or other selected appliance thereto. Appliance control means then are mounted on the carriage for starting and stopping the appliance at selected locations and after predetermined durations of carriage travel. Thus such structural surfaces as walls, floors and vessel interiors can be processed rapidly and efficiently from a remote station, without the use of scaffolding.

2

Considering the foregoing in greater detail and with particular reference to FIGS. 1 and 2 of the drawings:

In the illustrated form of the invention, the mounting apparatus is applied to the mounting of a traveling paint, plastic, or concrete spray gun to be used for coating a vertical wall surface.

The apparatus includes an elongated frame 10 which may comprise a hollow, pole-like structure of rectangular cross section, made of light weight sheet aluminum. The interior of the frame is divided by a longitudinal partition 12. Its top is covered with a plate 14 and its bottom with a plate 16. A slot 18, which serves as a guideway, extends almost the full length of the frame on one side.

Mounted within the frame for longitudinal reciprocation is a carriage indicated generally at 20. The carriage may be constructed of a pair of spaced plates 22, 24 which mount wheel and axle assemblies 26, as well as shafts 28, 30. The wheels of assemblies 26 track on partition 12 and on the opposed inner side wall of frame 10.

Reciprocating drive means are connected to the carriage. Such means may comprise a reversing, variable speed, electric motor 32, supported at the base of the frame and connected to a gear box 34. The shaft of the latter mounts a reel 36 which in turn drives a flexible cable 38. One end of the cable is connected to one end of carriage 20 while the other is connected to the other end of carriage 20 after being passed about a pulley 40 mounted rotatably on a shaft 42.

Motor 32 is in an electric circuit with limit switches 44, 46 operated, respectively, by spring contact members 48, 50 mounted on partition 12 and traversed by carriage 20 at the limits of its travel. Accordingly, when motor 32 is energized, it drives carriage 20 in a given direction until it is reversed by operation of one or the other of the limit switches, thus reciprocating the carriage at the desired speed.

The carriage supports in operative position an appliance to be used for processing various structural surfaces from remote locations. The appliance may comprise a powered or stationary brush, scraping or burnishing tool, a buffing unit, or, as illustrated, a spray gun 64 to be used for applying paint, concrete, plastic, or other selected coating material.

In the illustrated form of the invention, the means employed for securing the appliance on the carriage comprises a bracket plate 52 welded to plate 22 of the carriage assembly and extending outwardly through guideway 18.

A cooperating plate 54 is pivoted to plate 50 by means of a removable screw 56. Lateral adjustment of plate 54 relative to plate 52 is obtained by providing the latter plate with a plurality of laterally spaced openings 58 through a selected one of which screw 56 may be inserted.

Angular adjustment of plate 54 relative to plate 52 is made possible by providing a plurality of rows of vertically spaced openings 60 in the latter plate. Each row is designed for use with a particular one of openings 58. A spring pressed pin 62 is mounted on plate 54 and arranged for insertion in one of openings 60 in plate 52 to secure the desired relative angular adjustment of the plates.

3

Plate 54 mounts appropriate means for holding spray gun 64 or other appliance. Although various types of holding means may be employed, there may be used to advantage a spring clamp 66 welded to the outer face of plate 54 and adapted to be clamped against the handle of the spray gun by means of screw 68. The butt of the spray gun then may be secured in support 70, fixed to the lower margin of plate 54.

Appliance control means also are provided, first for turning the appliance on and off at the will of the operator, and second for turning it off automatically at the points of reversal of motion.

To this end there is mounted within carriage 20 a lever unit indicated generally at 72 and including a pair of spaced plates 74, 76. These plates are pivoted on axle 28 of carriage 20, which axle also mounts a pulley 78 positioned between the plates. A second pulley 80 is mounted on shaft 30 of the carriage, in substantial alignment with pulley 78. A third pulley 82, laterally offset from pulleys 78, 80 is mounted for rotation on shaft 84 supported between plates 74, 76 of the lever unit.

The end of the lever unit remote from its pivot point 28 is connected by a cable, a chain or other link member 86 to the trigger of appliance 64, thereby making possible the operation of the latter from a remote station.

Such connection is accomplished by securing one end of a flexible link member 88 to shaft 42 of pulley 40 at the top of the unit, reeving the link member about pulleys 78, 80, 82 in the manner indicated in FIG. 1, passing it about another pulley 90 rotatably mounted at the bottom of the unit and then securing its other end to the end of shaft 42 at the top of the unit.

A contact pin 92 is fastened to link 88. This, in turn, is engaged by a handle 94 pivoted to a housing 96 and cooperating with a stationary handle 98, convenient to the operator as he holds the unit. When the handles are closed pulley 82 mounted on lever unit 72 is moved to the left, as viewed in FIG. 1. This, in turn, trips the trigger of appliance 64, setting it in operation.

When the handles are released, resilient means operate to return lever assembly 72 to the inoperative position of the appliance. Such resilient means may comprise a coil spring 100, one end of which is fastened to an upper extension of the lever assembly and the other to the shaft of one of wheel assemblies 26, or other suitable support.

For shutting off the appliance while the carriage is in the process of reversing its direction of travel, there is provided a pair of cams 102, 104 located respectively at the top and bottom of the unit. A cam follower 106 is mounted on the outer end of an arm 108 which extends outwardly from lever unit 72. The manner of positioning cam follower 106 is such that at the points of reversal of the carriage travel, as determined by limit switches 44, 46, the roller is operated by one or the other of the cams. This moves the lever assembly angularly to the right as viewed in FIG. 1 and releases the trigger of appliance 64, shutting it off.

Thus as long as handles 94, 98 are pressed together, the carriage assembly and the appliance which it mounts will travel automatically back and forth at the desired speed, with the appliance being turned off automatically by cams 102, 104 at each reversal of direction of the carriage and by spring 100 upon release of handles 94, 98.

Means also are provided for spacing the appliance the proper distance from the surface upon which it operates. The spacing means comprises a pole 110 having a leading end adapted to contact the surface. The pole is clamped adjustably to plate 14 of the mounting unit and may be secured in any desired degree of extension by means of clamps 112 and associated wing nuts 114.

A second embodiment of the present invention is illustrated in FIGS. 3-10 of the drawings. The apparatus includes an elongated, pole-like, hollow frame of rectangular cross section having side walls 120 and 122, rear wall 124 and front wall 126. The front wall is pro-

4

vided with an elongated slot 128 extending the full length thereof. The upper and lower ends of the slots are closed by plates 130 and 132, respectively, each of which supports a resilient bumper 134. These bumpers serve as resilient stops which define the limits of travel of the appliance supporting carriage 136.

The carriage comprises a flat plate which supports the upper and lower pairs of guide wheels 138 having annular grooves tracking in the longitudinal ribs 140 projecting inwardly from the front and rear walls of the frame. These ribs extend the full length of the frame, thus accommodating movement of the carriage between the limits of the bumpers.

By virtue of the provision of the slot 128 in the front wall of the frame, a degree of flexibility is provided between the front and rear walls, sufficient to prevent binding of the guide wheels. This permits the frame to be manufactured with greater specifications tolerance, and hence more economically, than in the modification first described.

The power drive for the carriage includes an elongated cylinder 142 housing a reciprocating piston 144 carrying the end seals 146. A length of nylon or other suitable flexible cable 148 is secured to one end of the piston and extends outwardly through the cylinder, slidably through the fluid seal 150, and thence is reeved over the pulley 152 and attached at its opposite end to the carriage. In similar manner a second length of cable 154 is secured at one end to the opposite end of piston 144 and extends outwardly through the opposite end of the cylinder, slidably through a similar fluid seal 150, and thence over the pulley 156 for connection at its opposite end to the carriage. This end extends through a guide loop on the carriage within the hollow frame, and thence outwardly through the slot 128 for attachment to the carriage by means of a shoulder bolt 157 on which the cable may be wrapped and thus tightened by rotation of the bolt. The carriage cable system thus is capable of being adjusted periodically to maintain proper tension.

It will be noted from FIG. 6 that the cable pulleys 152 and 156 are mounted at an angle relative to the side walls of the frame. It is by this means that the cables 148 and 154 may interconnect the laterally displaced carriage 136 and power piston 144 while insuring proper operation of the cables over the pulleys.

Fluid conduits 158 and 160 communicate with opposite ends of the cylinder 142 and are connected through a multi-way valve 162 selectively to an inlet conduit 164 leading from a source (not shown) of air pressure. The valve includes a control member 166 which is operable to connect the inlet conduit selectively to either of the fluid conduits, the other conduit being simultaneously opened to the atmosphere through an adjustable exhaust port 168 in the valve. The adjustable exhaust ports thus make it possible to control the rate of travel of the carriage selectively in its opposite directions.

The valve control member 166 is connected through the pivoted lever 170 to the elongated control bar 172 which is supported for longitudinal sliding movement in the elongated guide channel 174 secured to the side wall of the frame. A plurality of finger openings 176 are provided in the bar for convenient hand manipulation of the latter at all levels of elevation of the apparatus. In this regard an elongated extension rod 178 is mounted adjacent the rear wall 124 of the frame for longitudinal adjustment relative to the latter. To this end the extension rod is supported frictionally in longitudinally spaced clamps 180 secured to the frame. Frictional pressure of the clamps is adjustable by the screw 182, thus permitting the rod to be adjusted to any degree of extension from the adjacent end of the frame. The projecting end of the extension rod preferably is provided with an enlarged footing 184.

The carriage plate 136 projects outwardly through the slot 128 in the frame and supports on its projecting portion an appliance mounting plate 186. A mounting

bolt 188 extends through the plate and is received removably in an elongated slot 190 in the carriage plate. The rearward end of the mounting plate 186 is curved arcuately about the mounting bolt as a center, and a plurality of circumferentially spaced radial notches 192 extend inwardly from the arcuate rear surface for selective reception of the securing bolt 194. The mounting plate 186 thus may be positioned at various angles relative to the frame, by appropriate selection of the notches 192.

Associated with the mounting plate 186 in a clamping plate 196, secured releasably thereto by means of the mounting bolt 188. The outer ends of the mounting plate and clamping plate having laterally projecting sections which cooperate to provide a clamp for securing between them the pistol grip of a spray gun 64.

The trigger of the spray gun is actuated by means of the trigger control rod 198 provided at its forward end with a hook 200 adapted to hook over the spray gun trigger. The control rod extends rearwardly through a guide opening in the lateral projection 202 of the control lever 204. Adjustable lock nuts 206 are mounted on a threaded portion of a control rod, on opposite sides of the lateral projection, for adjusting the forward extension of the control rod hook to properly engage the spray gun trigger. The lock nuts are spaced apart sufficiently to permit the control rod to pivot relative to the projection 202 as the control lever is actuated.

The control lever extends rearwardly through the frame slot 128 and is mounted pivotally on the carriage 136 by means of the pivot screw 208. The control lever supports a pulley 210 mounted for rotation on the screw 212. Associated with this pulley are pulleys 214 and 216 spaced longitudinally on opposite sides of and rearwardly of said pulley 210, being mounted on the carriage for rotation on the screws 218. A trigger control cable 220 is secured at one end to a side wall 120 of the frame, thence passes over the pulleys 214, 210, 216 and then extends toward the opposite end of the frame where it is passed over the pulley 222. The cable then extends outward through an opening in the side wall 122 of the frame and thence upward toward the top end of the frame. The cable re-enters the hollow interior of the frame through an opening in the side wall, and that end of the cable is attached to the lower end of a coil spring 224. The upper end of the spring is secured to the side wall of the frame.

The coil spring 224 functions to maintain the control cable tensioned sufficiently to draw the pulley 210 rearwardly, pivoting the control lever 204 clockwise (FIGS. 4 and 8) and thus retracting the control rod to actuate the trigger of the spray gun. Adjustment of this tension, to accommodate varying trigger tensions of diverse spray guns, may be accomplished by selecting appropriate anchor positions for the coil spring, or by other appropriate means, as will be apparent.

Means is provided for moving the control lever 204 to the counterclockwise position for trigger release, automatically as the carriage 136 approaches the opposite ends of its travel. In the illustrated embodiment, this means is provided by the cam elements 226 and 228 each located adjacent one of the opposite ends of the carriage travel. These cams cooperate with a cam follower roll 230 mounted on a lateral extension of the pivot 212 for the pulley 210. Thus, as the carriage approaches an end of its travel the cam follower roll rides along the incline of the corresponding cam, thereby rotating the control lever 204 counterclockwise, against the tension of the coil spring 224. At this point the spray gun is shut off automatically. However, when the valve control bar 172 is manipulated to reverse the direction of movement of the carriage, the spray gun is again activated automatically under the tension of the coil spring 224, as the cam follower roll retracts along the cam.

By means of the foregoing automatic control, the operator is involved only with the manipulation of the valve control bar 172. However, there are various circumstances of use of the apparatus in which it is desirable for the operator to maintain manual control over the spray gun operation. Such as circumstance exists, for example, in the painting of a wall which includes a window intermediate the ends of travel of the carriage. It is desirable, in this case, that the operator be able to shut off the spray gun as it traverses the window area. To this end, manual control is afforded by relieving the control cable 220 of the tension of the coil spring 224. In the embodiment illustrated, this is achieved by providing a loop 232 in the control cable adjacent the end attached to the coil spring, but on the outside of the side wall 122 of the frame. A projecting pin 234 on said side wall is adapted to receive said cable loop, and the loop is so located on the cable that it registers with the pin only when the coil spring 224 is stretched sufficiently to render the remaining length of the control cable slack, as illustrated in FIG. 8.

The coil spring thus having been rendered inoperative to tension the cable, the control lever 204 is retained in its position of counterclockwise rotation by the spring tension of the spray gun trigger. Accordingly, manual control of the spray gun is afforded the operator simply by pulling on the slack length of control cable, as illustrated in FIG. 3. Cable guides 236 and 238 are mounted on the carriage and include short lengths of guide tubing 240 which slidably but frictionally receive the control cable therethrough. These assemblies serve to retain the control cable in proper alignment with the pulleys and also maintain a degree of frictional gripping of the control cable to prevent their disengagement from the pulleys when the cable is rendered slack for manual operation. Assisting further in this regard is the U-shaped channel 242 straddling the pulley 210 for retaining the control cable thereon.

Means also is provided for shielding the mechanism within the hollow frame from the spray of material from the gun, whereby to protect the mechanism against contamination and malfunctioning. In the embodiment illustrated, and best shown in FIG. 5, said means comprises a pair of elongated strips 244 and 246 of flexible sheet material, such as synthetic thermoplastic resin. These strips extend the full length of the slot 128 and close the latter in overlapping relation, in the manner of a curtain. The outer edge of each strip is received in a elongated groove 248 provided in the front wall 126 of the frame by means of the offset flanges 250. The strips are retained removably in the grooves by frictional pressure of the elongated resilient beading 252. In the embodiment illustrated, this beading is provided in the form of elongated hollow tubing of synthetic thermoplastic resin which collapses slightly when forced into the grooves between the curtain strip and associated flange.

The resilient curtain strips tends normally to assume the overlapping relationship illustrated in dash lines in FIG. 5, throughout the major length of the slot 128. However, the curtain strips bend forwardly in the area of the forwardly projecting carriage plate 136 and associated structure, as illustrated in full lines in FIG. 5, as the carriage moves through its limits of travel. Thus, the slot 128 is closed effectively throughout its entire length while permitting unobstructed travel of the carriage.

The grooves 248 of flanges 250 also serve to receive the end plates 130 and 132, the latter being secured to the front wall 126 by the screws 253.

As in the embodiment first described, an elongated pole 254 is secured adjustably adjacent the top end of the frame, by means of the clamps 256, to provide for spacing the appliance at the proper distance from the surface on which it is to operate.

FIGS. 9 and 10 illustrate a form of holder for mounting various other types of appliances, such as a scraper

blade, wire brush, paint roller, and others. Thus, the holder may be used in place of the mounting plate 186 and clamping plate 196 described hereinbefore. The holder includes a T-shaped mounting bracket 253 supporting on its lateral arms a pair of tubular sockets 260. These sockets are spaced apart sufficiently to receive the projecting portion of carriage plate 136 between them, with one of the arms of the bracket extending freely into the slot 190. The leg of the bracket thus abuts the carriage plate and is secured thereto by means of the mounting bolt 188 which, in this instance, extends through aligned openings in the leg of bracket 253 and in the carriage plate adjacent slot 190.

An elongated coil spring 262 is secured at its rearward end in each of the sockets 260, as by means of the set screw 264, and the forward ends of the springs are secured in similar sockets 266, by similar set screws 268. The sockets 266 are secured to opposite sides of a tubular appliance holder 270 adapted to support the handle of an appliance.

The forwardly projecting springs 262 are sufficiently rigid to support the appliance, but sufficiently resilient to permit bending in radial directions for proper use of the appliance. This resilient bending is particularly advantageous to the proper use of scraper blades and wire brushes.

Although the frame of the apparatus has been referred to hereinbefore as having top and bottom ends, it will be understood that this has been done simply for convenience of description. In addition to using the apparatus in the upstanding arrangement illustrated in FIG. 3, it may also be disposed horizontally. Further, the apparatus may be turned end for end and suspended downwardly from the top of a building.

It is to be understood that the forms of my invention herein shown and described are to be taken as preferred examples of the same and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. Mounting apparatus for traveling, structural-surface-processing appliances, said mounting apparatus comprising:

- (a) an elongated frame having a longitudinal guideway in one side,
- (b) a carriage guided for longitudinal reciprocation in the frame,
- (c) reciprocating drive means connected to the carriage,
- (d) bracket means mounted on the carriage and extending laterally through the guideway,
- (e) appliance-securing means on the bracket means,
- (f) appliance control means on the carriage for starting and stopping the operation of the appliance at selected positions of carriage travel,
- (g) the appliance control means comprising an appliance control lever mounted on the carriage for movement between appliance activating and deactivating positions, a control cable secured at its ends to the frame and slidably engaging the control lever for actuating the latter, and
- (h) cam means on the frame arranged to engage the control lever adjacent the ends of travel of the carriage and operable to move the control lever to appliance-deactivating position.

2. The mounting apparatus of claim 1 wherein the frame comprises a hollow frame of rectangular cross section and the carriage comprises a wheeled carriage tracking on the inside side walls of the frame.

3. The mounting apparatus of claim 1 wherein the bracket means comprises a pair of perforated, overlapping plates pivoted together for angular relative movement and locking pin means for releasably securing to-

gether the plates in selected positions of angular adjustment, the appliance-securing means being mounted on one of the plates.

4. The mounting apparatus of claim 1 including operating means mounted movably on the frame and engaging the control cable for moving the latter to effect movement of the appliance control lever between appliance activating and deactivating positions at selected positions of carriage travel between the cam means.

5. The mounting apparatus of claim 1 including spacing means for spacing the top of the frame a predetermined distance from the surface to be processed, and fastening means for securing the frame to the spacing means.

6. The mounting apparatus of claim 1 wherein the drive means comprises an elongated air cylinder having a reciprocating piston therein, cable means interconnecting the carriage and piston through opposite ends of the cylinder, and control valve means connecting the opposite ends of the air cylinder to a source of air under pressure.

7. The mounting apparatus of claim 1 wherein the frame comprises an elongated hollow member having said longitudinal guideway therein receiving the carriage bracket outwardly therethrough, and including overlapping resilient curtain strips mounted on the frame and extending across said substantially closing said slot with the carriage bracket projecting outwardly between the curtain strips.

8. The mounting apparatus of claim 1 wherein the frame comprises an elongated hollow member of rectangular cross section having said longitudinal guideway in one wall thereof, the carriage supports guide wheels thereon, and the frame includes longitudinal ribs one located adjacent the slot and the other located on the wall opposite the slot, said ribs forming tracks for the carriage guide wheels.

9. The apparatus of claim 5 wherein the spacing means comprises a laterally extending pole and wherein the fastening means comprises clamps for releasably clamping the top of the frame to a selected segment of the pole.

10. Mounting apparatus for traveling, structural-surface-processing appliances, said mounting apparatus comprising:

- (a) an elongate frame having a longitudinal guideway in one side,
- (b) a carriage guided for longitudinal reciprocation in the frame,
- (c) reciprocating drive means connected to the carriage,
- (d) bracket means mounted on the carriage and extending laterally through the guideway,
- (e) appliance-securing means on the bracket means,
- (f) appliance control means on the carriage for starting and stopping the operation of the appliance at selected positions of carriage travel,
- (g) the appliance control means comprising an appliance control lever mounted on the carriage for movement between appliance activating and deactivating positions, a control cable secured at its ends to the frame and slidably engaging the control lever for actuating the latter, and
- (h) resilient means interposed between the secured ends of the control cable and operable to tension the latter sufficiently to move the control lever to appliance-activating position.

11. The mounting apparatus of claim 10 including interengaging means on the frame and control cable arranged for releasable interengagement when the portion of the control cable extending therefrom opposite the resilient means is slack, whereby to disable the resilient means and afford manual operation of the control cable.

12. Mounting apparatus for traveling, structural-surface-processing appliances, said mounting apparatus comprising:

- (a) an elongated frame having a longitudinal guideway in one side, 5
- (b) a carriage guided for longitudinal reciprocation in the frame, 10
- (c) reciprocating drive means connected to the carriage,
- (d) bracket means mounted on the carriage and extending laterally through the guideway, 10
- (e) appliance-securing means on the bracket means,
- (f) appliance control means on the carriage for starting and stopping the operation of the appliance at selected positions of carriage travel, 15
- (g) the appliance control means comprising an appliance control lever mounted on the carriage for movement between the appliance activating and deactivating positions, a control cable secured at its ends to the frame and slidably engaging the control lever for actuating the latter, and 20

- (h) control lever operating means on the frame arranged to engage the control lever adjacent the ends of travel of the carriage and operable to move the control lever to appliance-deactivating position.

References Cited by the Examiner

UNITED STATES PATENTS

1,431,084	10/22	Angelmyer	74—566 X
1,611,903	12/26	Gelb	248—125 X
1,722,402	7/29	Veilleux	248—289
1,762,523	6/30	Orloff.	
2,083,633	6/37	Brackett	118—323
2,094,124	9/37	Huffman	173—147 X
2,212,576	8/40	Teodonno	118—323
2,291,539	7/42	Faber et al.	
2,435,816	2/48	Anderson	248—125 X
2,628,645	2/53	Andrews	74—37 X
2,728,238	12/55	Paasche	74—37 X

BROUGHTON G. DURHAM, *Primary Examiner*.