

July 29, 1924.

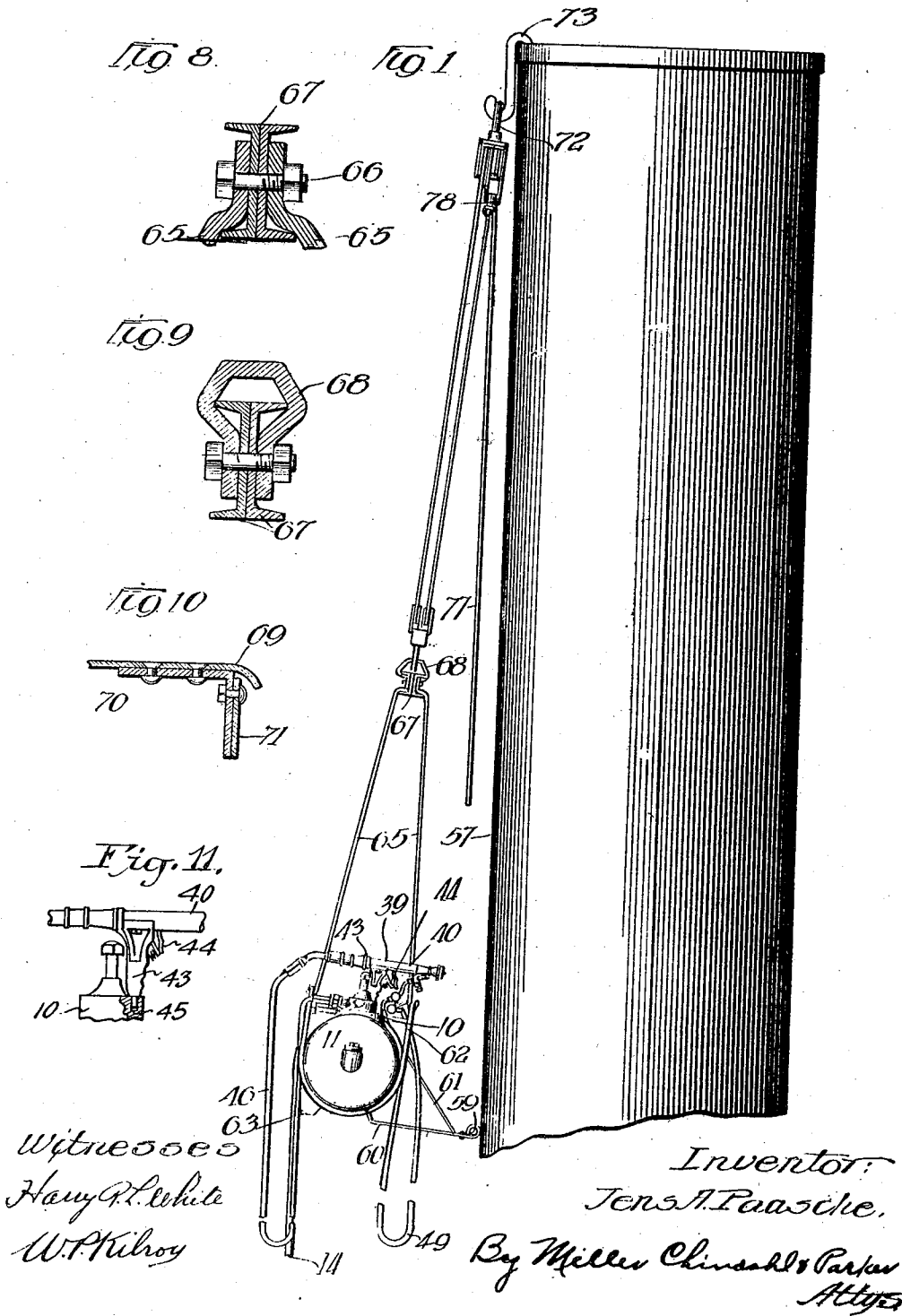
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J. A. PAASCHE

PNEUMATIC PAINTING APPARATUS

Filed July 19, 1919

3 Sheets-Sheet 1



July 29, 1924.

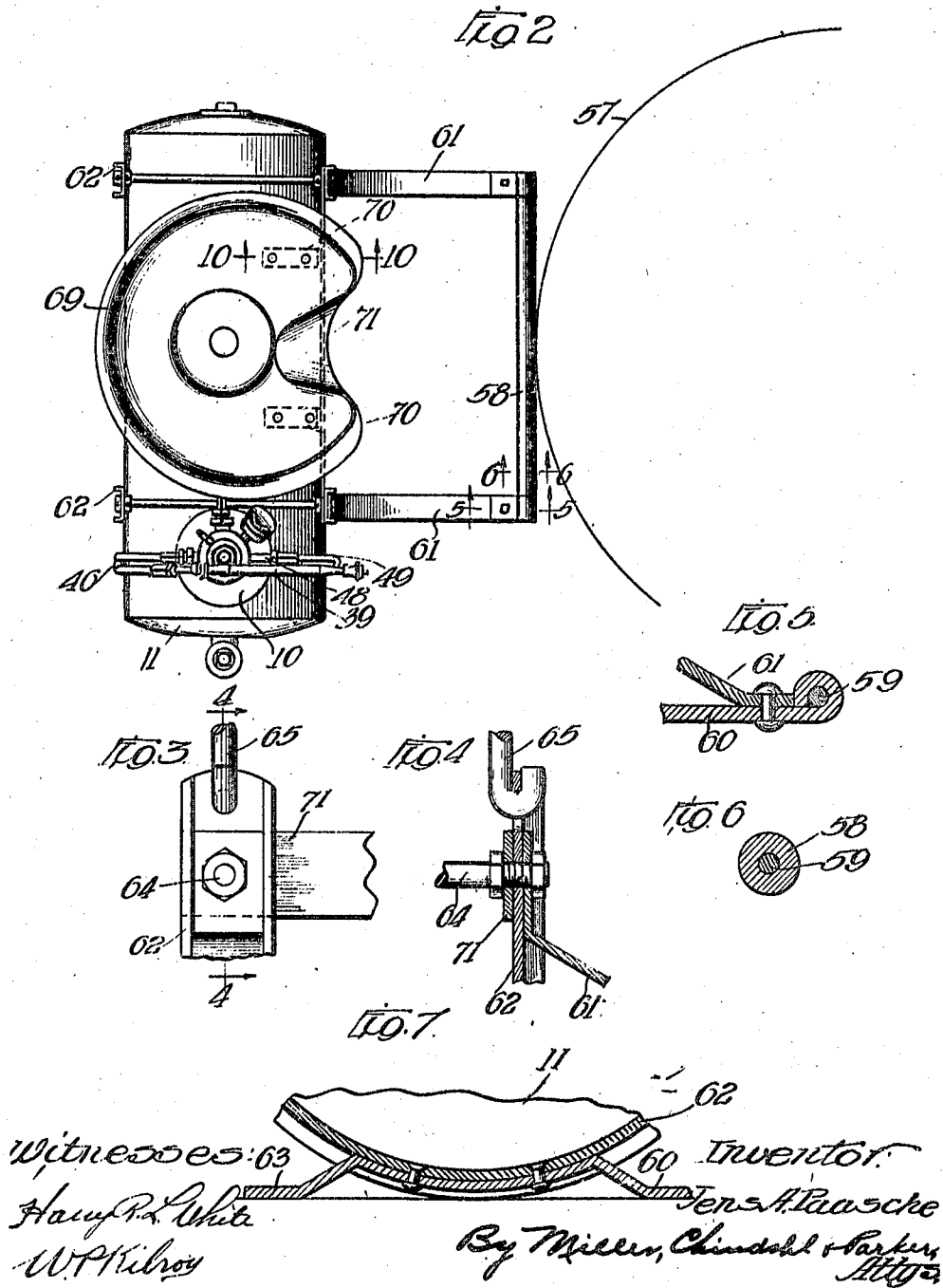
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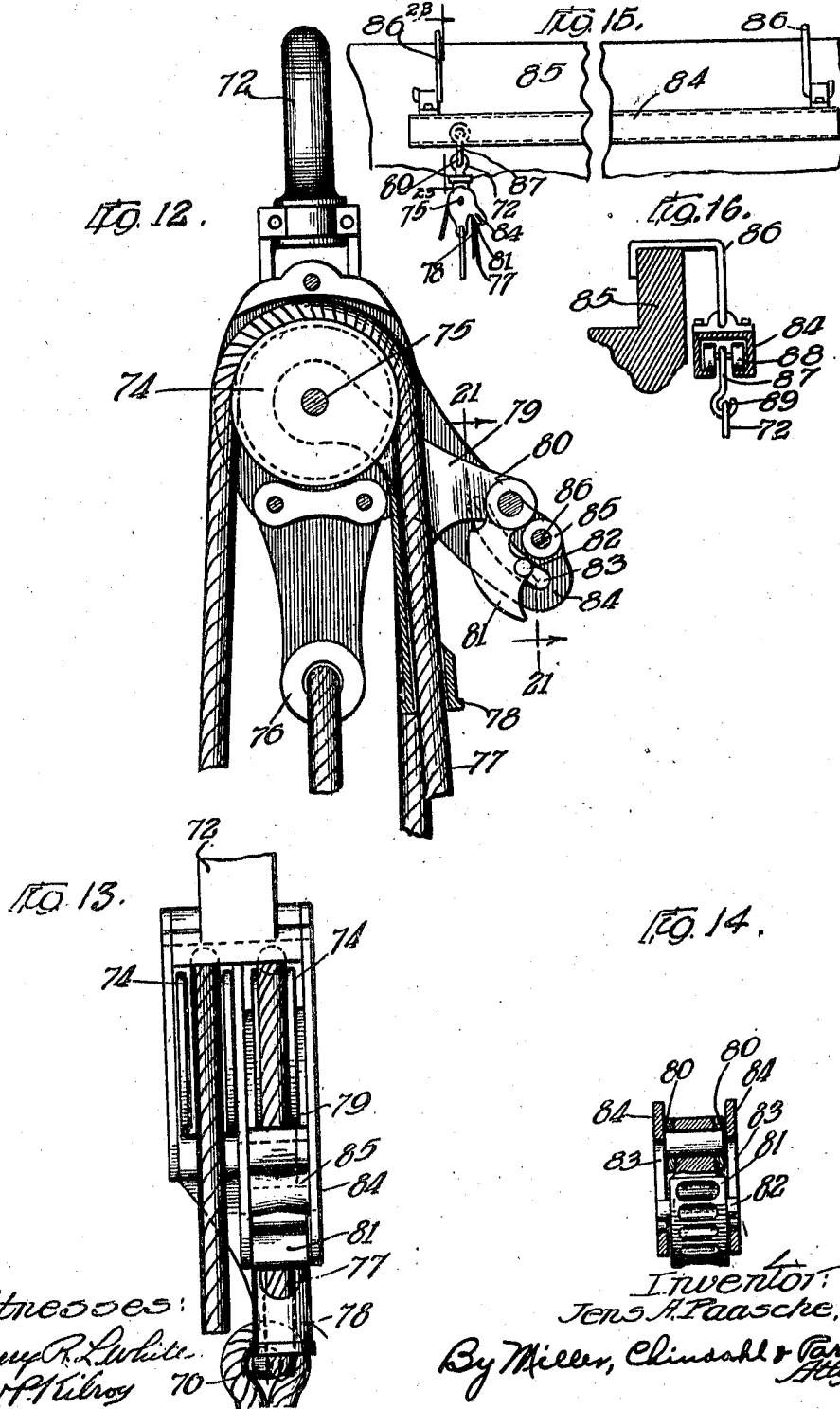
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

JENS A. PAASCHE, OF CHICAGO, ILLINOIS.

PNEUMATIC PAINTING APPARATUS.

Application filed July 19, 1919. Serial No. 311,945.

To all whom it may concern:

Be it known that I, JENS A. PAASCHE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Pneumatic Painting Apparatus, of which the following is a specification.

My invention relates to a pneumatic painting apparatus, and more specifically to an improved device for painting the walls of high buildings, smoke stacks, etc.

The general object of the invention is to provide a compact and unitary apparatus of this character, comprising a supporting structure which is arranged to carry the operator and support the elements of the painting means in convenient reach of the operator, and means for suspending said supporting structure from an overhead point along the wall to be painted and for raising and lowering said structure, said means being operable by the operator from his working position.

Another object is to provide a device adapted to operate at any height and carry its paint supply with it so that only one tube from the ground to the apparatus is required.

A further object is to provide an apparatus of this character which comprises a supporting frame adapted to be suspended along the wall to be painted, a seat for the operator carried by said frame, a paint tank carried by said frame and located directly beneath the operator's seat, means for spacing said seat and tank away from the wall to be painted to provide room for the operator's feet, and a control head mounted on said paint tank at the right of the operator's seat through which head the air and paint flows to the paint brush.

Further objects and advantages of my invention will become apparent as the description proceeds.

In the accompanying drawings Figure 1 is a side elevation of a device showing one embodiment of my invention. Fig. 2 is a plan view of the same device, the supporting tackle being omitted. Fig. 3 is a front view of the joint between the tank holding strap and one of the hanger rods. Fig. 4 is a section on the line 4—4 of Fig. 3. Fig. 5 is a section on the line 5—5 of Fig. 2. Fig. 6 is a section through the roller engaging the stack on the line 6—6 of Fig. 2. Fig. 7 is a fragmental view showing in section one of

the floor rods and its fastening to the paint tank. Fig. 8 is a section of the scaffold beam near one end showing the attachment of the hanger rods thereto. Fig. 9 is a section of the scaffold beam near the center showing the clip to which the hoisting tackle is attached. Fig. 10 is a section on the line 10—10 of Fig. 2 showing the fastening for the set. Fig. 11 is a detail view showing the means for supporting the air brush when not in use. Fig. 12 is a side view of the upper pulley sheave of the hoisting tackle with one of the side plates removed. Fig. 13 is a view at right angles to Fig. 12. Fig. 14 is a detail section on the line 21—21 of Fig. 12. Fig. 15 is a side elevation of a track used for supporting the painting outfit adjacent a wall. Fig. 16 is a section on the line 23—23 of Fig. 15.

In the embodiment of the invention herein disclosed the paint tank 11 is an elongated cylindrical tank disposed horizontally, and the supporting frame or carriage is especially constructed to conform to the tank. This supporting frame, in the present instance, comprises two U-shaped straps 62 which embrace and underlie the opposite ends of the tank 11, the upper ends of each of said straps being connected together and spaced apart by rods 64. The straps are also connected to each other by one or more bars 71, there being in the present instance only one such bar, the ends of which are secured by the rods 64 to the adjacent ends of the two straps 62, said bar extending parallel with the tank 11.

The seat 69 for the operator is preferably located immediately over and centrally of the tank 11, and this seat, in the present instance, is secured in place by suitable brackets 70 fastened to the seat and to the bar 71, as shown in Fig. 10. The seat may also rest on the top of the tank 11.

The supporting carriage or frame further comprises means for spacing the tank 11 and seat 69 away from the wall or surface being painted. This spacing means comprises in the present instance a pair of base bars 60 (Fig. 1) each of which is secured to the lower or mid-portion of the U-shaped strap 62, as seen in Fig. 7, said bars projecting forwardly and carrying at their free ends roller means to engage the surface to be painted. In the present instance, this roller means comprises a single long roller 58 mounted on a rod 59, the ends of which are

received in suitable bearings on the ends of the bars 60. (See Figs. 5 and 6.) A pair of diagonal braces 61 extends from the forward ends of the bars 60 rearwardly and upwardly to the front legs of the U-shaped strap 62 to lend rigidity to the structure. The parts 61, 62 and 71 may be secured together at one point by nuts on the ends of the rods 64 as shown in Fig. 4.

10 In order to permit of resting the carriage upon the ground or other horizontal surface, the bars 60 are shaped to provide a base or supporting legs by being bent downwardly from their point of attachment to the straps 62 before projecting forwardly, and the rear ends of the bars are likewise bent downwardly at 63 as clearly seen in Fig. 7.

The structure thus far described is suspended by hanger rods 65, of which there are two pairs, the lower ends of each pair being suitably connected to the ends of one of the straps 62, in the present instance by means of a hook on each hanger rod engaging in a hole in the strap end as seen 25 in Fig. 4. The upper ends of the two pairs of hanger rods 65 are suitably secured as by bolts 66 (Fig. 8) to the opposite ends of a scaffold beam 67 which may be of any suitable construction. To the middle of this 30 beam is fastened a clip 68 which engages with the lower sheave of the hoisting tackle to be presently described.

The air brush 39 may be of any preferred construction, the one herein shown being 35 of the well known type disclosed in my prior Patent No. 1,273,784 issued July 23, 1918. Briefly the brush comprises a body 40 having a pistol grip handle 43 and triggers 44 for the control of the discharge 40 of air and paint from the brush.

In the exemplary structure herein shown the air and paint lines are connected to a main control head 10 which is mounted in an opening in the tank 11, said head being 45 located at the right hand side of and close to the operator's seat 69 so as to be conveniently accessible. Air is supplied from a suitable source on the ground through a hose 14 connected to a coupling on the control head 10, and the air passes from said head 50 to the brush through a tube 46. A portion of the air from the supply tube 14 passes through the control head into the paint tank to deliver pressure on the paint therein, 55 and the paint passes through the control head and through a flexible tube 49 to the air brush 39. A suitable socket 45 (Fig. 11) is also provided on the control head 10 to receive a pin on the end of the handle 60 43 of the air brush for supporting the brush in upright position as seen in Fig. 1 when not in use.

The control head 10 may be of any desired construction in so far as the present invention is concerned, heads of this general

character being known in the art. They usually comprise certain adjustments for regulating the flow and pressure of the air and paint.

By mounting the seat 69 directly over the 70 tank 11 and locating the control head 10 at the right of the operator's seat I effect a very compact and convenient arrangement for the operator. Furthermore, the means 58, 59, 60, 61 for spacing the tank and seat 75 away from the surface being painted affords room for the operator's feet and legs and spaces his body at a suitable distance from such surface to permit him to work efficiently.

In Figures 12, 13 and 14 I have illustrated 80 an exemplary construction for the upper sheave of the locking hoisting tackle shown in Fig. 1. The upper sheave comprises an eye 72 adapted to engage a suitable hook 73 85 (Fig. 1) carried by the supporting structure, and in this instance carrying two pulleys 74 suitably pivoted at 75, said sheave also having a downward projection terminating in an eye 76 for the attachment of 90 the end of the cable used. The tank is raised and lowered by taking in or letting out the strand 77 shown at the right in Fig. 12. This strand passes through a tubular socket 78 in the end of a rocker arm 79 pivoted on the pintle 75 which carries the 95 pulleys themselves and having a projecting arm 80 carrying a pivoted rocker 81 having a curved face suitably cut to form teeth to grip and engage the rope. The movement of the rocker 81 is controlled by the 100 engagement of a pin 82 in the curved slots 83 cut in the flanges 84 extending from the main body of the sheave on either side of the rocker and suitably held in spaced relation by a block 85 and rivet pin 86. It 105 will be seen that a movement of the strand 77 from the position shown in Fig. 12 to the right will rotate the rocker arm around its pivot raising the projection 80, drawing the 110 pin 82 along the slots 83 and carrying the rocker 81 into engagement with the rope. Release of the tension on the strand 77 will not unlock the parts as the tension in the portion of the rope extending over the 115 pulley and carrying the weight of the device pulls on the rocker arm in the direction in which the rope extends. This force is in a line tangential to the circumference of the pulley, whereas the rocker arm is pivoted at the center of the pulley and the turning force exerted on the rocker arm will tend to rotate it to the right, as shown in Fig. 12, and hold the rocker in locking engagement 125 with the rope.

The workman on the seat 69 has the brush 39 and the control head 10 conveniently located at his right hand. He may rest his feet on the roller 58 or against the stack 57 or both and swing himself and the entire de- 130

vice from side to side by pushing against the wall of the stack. He may raise and lower himself by the strand 77 which hangs conveniently in front of him, and he may
5 pick up the brush to paint the surface in front of him, and when moving to a new unpainted surface, set the brush back on its support.

In painting a chimney, the eye 72 may be
10 supported as illustrated in Fig. 1. When painting a wall, a track 84 is provided (see Fig. 15) supported adjacent the top of the wall 85 by suitable hooks 86 engaging over the upper edge of the wall. A carriage 87
15 supported by suitable rollers 88 engaging the intumed flanges of the track 84 as clearly indicated in Fig. 16, carries a hook 89 adapted to engage and support the eye 72. In working on a wall the operator may
20 easily move himself from side to side by pushing against the wall.

While I have illustrated and described in detail the embodiment of my invention at present preferred, it should be clearly understood that many modifications and improvements will naturally occur to persons skilled in the art. I desire the detailed description
25 to be considered as illustrative only, and aim in the subjoined claims to cover all such legitimate variations and modifications of my
30 invention.

I claim as my invention:

1. A pneumatic painting apparatus comprising, in combination, a receptacle adapted
35 to contain paint, hoisting tackle adapted to be attached to the upper edge of a supporting structure or building to raise and lower said receptacle, and a framework on said receptacle having laterally projecting
40 members adapted to hold said receptacle away from said supporting structure.

2. A pneumatic painting apparatus comprising, in combination, a receptacle adapted to contain paint, an operator's seat fastened
45 to said receptacle, a pneumatic brush connected to said receptacle by flexible tubes, and hoisting tackle adapted to raise and lower said receptacle, seat and brush and to support them at any desired elevation.

3. A pneumatic painting apparatus comprising, in combination, a receptacle, a framework on said receptacle, said framework comprising means for attachment to a
50 hoisting tackle, laterally projecting means adapted to keep said receptacle away from a wall, and means for engaging a flat horizontal surface to support said receptacle thereon.

4. A pneumatic painting apparatus comprising, in combination, a receptacle, straps
60 encircling the lower portion of said receptacle adjacent the ends thereof and having their ends extending upwardly, hanger rods engaging the upwardly extending ends of said straps, a beam attached at its ends to

the upper ends of said hanger rods, and a clip at the center of said beam adapted to engage a supporting member.

5. A pneumatic painting apparatus comprising, in combination, a receptacle, straps
70 encircling the lower portion of said receptacle adjacent the ends thereof and having their ends extending upwardly, hanger rods engaging the upwardly extending ends of said straps and converging upwardly, and
75 spacing rods extending between the ends of said straps to maintain them in parallelism.

6. A pneumatic painting apparatus comprising, in combination, a receptacle, straps
80 encircling the lower portion of said receptacle adjacent the ends thereof and having their ends extending upwardly, hanger rods engaging the upwardly extending ends of said straps and floor rods attached to the lower portions of said straps and adapted to
85 support said receptacle on the ground.

7. A pneumatic painting apparatus comprising, in combination, a receptacle, straps
90 encircling the lower portion of said receptacle adjacent the ends thereof and having their ends extending upwardly, hanger rods engaging the upwardly extending ends of said straps, floor rods attached to the lower portions of said straps and adapted to support said receptacle on the ground, said floor
95 rods extending laterally, a roller extending parallel to said receptacle and laterally spaced therefrom, said roller being mounted on and supported by the laterally projecting ends of said floor rods, and braces extending
100 from the end of each floor rod to the adjacent upper end of the corresponding strap.

8. A pneumatic painting apparatus comprising, in combination, a receptacle, means for hoisting said receptacle to and for supporting it at any desired elevation, a pneumatic brush, an operator's seat centrally
105 mounted on said receptacle and a member located at the right hand of the operator and attached to said receptacle, said member being adapted to receive and support said brush.

9. A pneumatic painting apparatus comprising, in combination, a carriage, means for suspending said carriage from an over-
115 head point along a vertical wall, a horizontal elongated paint tank mounted in said carriage, a seat for an operator located directly over said tank, a control head on said tank at the right of the operator's seat, a
120 pneumatic paint brush having a flexible tube connection with said control head, and means for spacing said tank and said seat from the wall to be painted to provide room for the operator's feet and legs and to position the
125 operator's body at the proper working distance from said wall.

10. A pneumatic painting apparatus comprising, in combination, a carriage, means for suspending said carriage from an over-
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head point along a vertical wall, a paint tank mounted in said carriage, a seat for the operator overlying said tank, a pneumatic paint brush connected to said tank, and
5 means for spacing said tank and said seat away from the wall to be painted.

11. A pneumatic painting apparatus, comprising, in combination, a carriage, means for suspending said carriage from an over-
10 head point along a vertical wall, a paint tank and a seat for the operator mounted in

said carriage, said tank having a control head in one wall, and a pneumatic paint brush connected to said tank through said control head, said seat being positioned di- 15
rectly over said tank and said control head being located close to said seat and within reach of the operator occupying said seat.

In testimony whereof, I have hereunto set my hand.

JENS A. PAASCHE.