

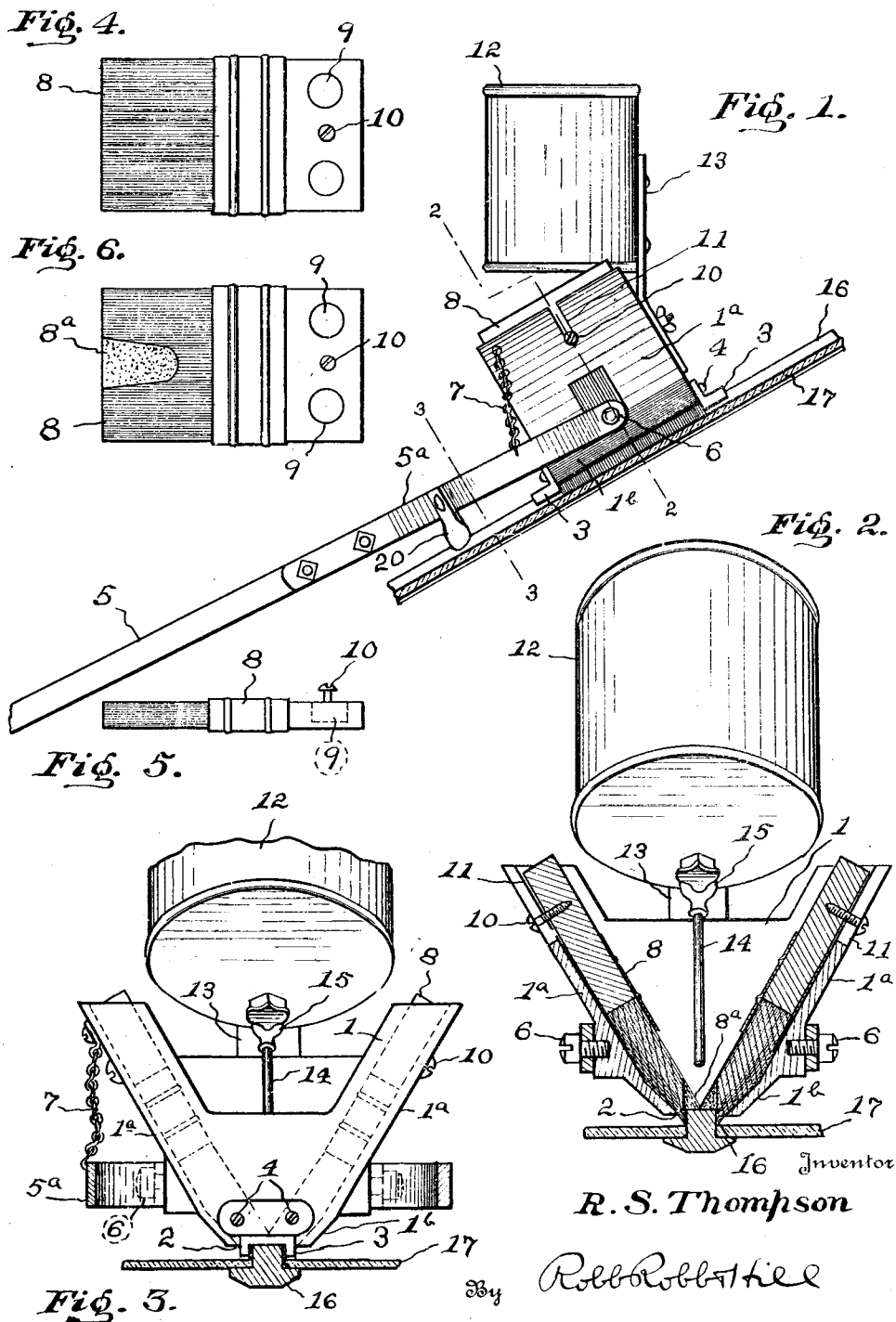
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Filed Sept. 14, 1925

2 Sheets-Sheet 1



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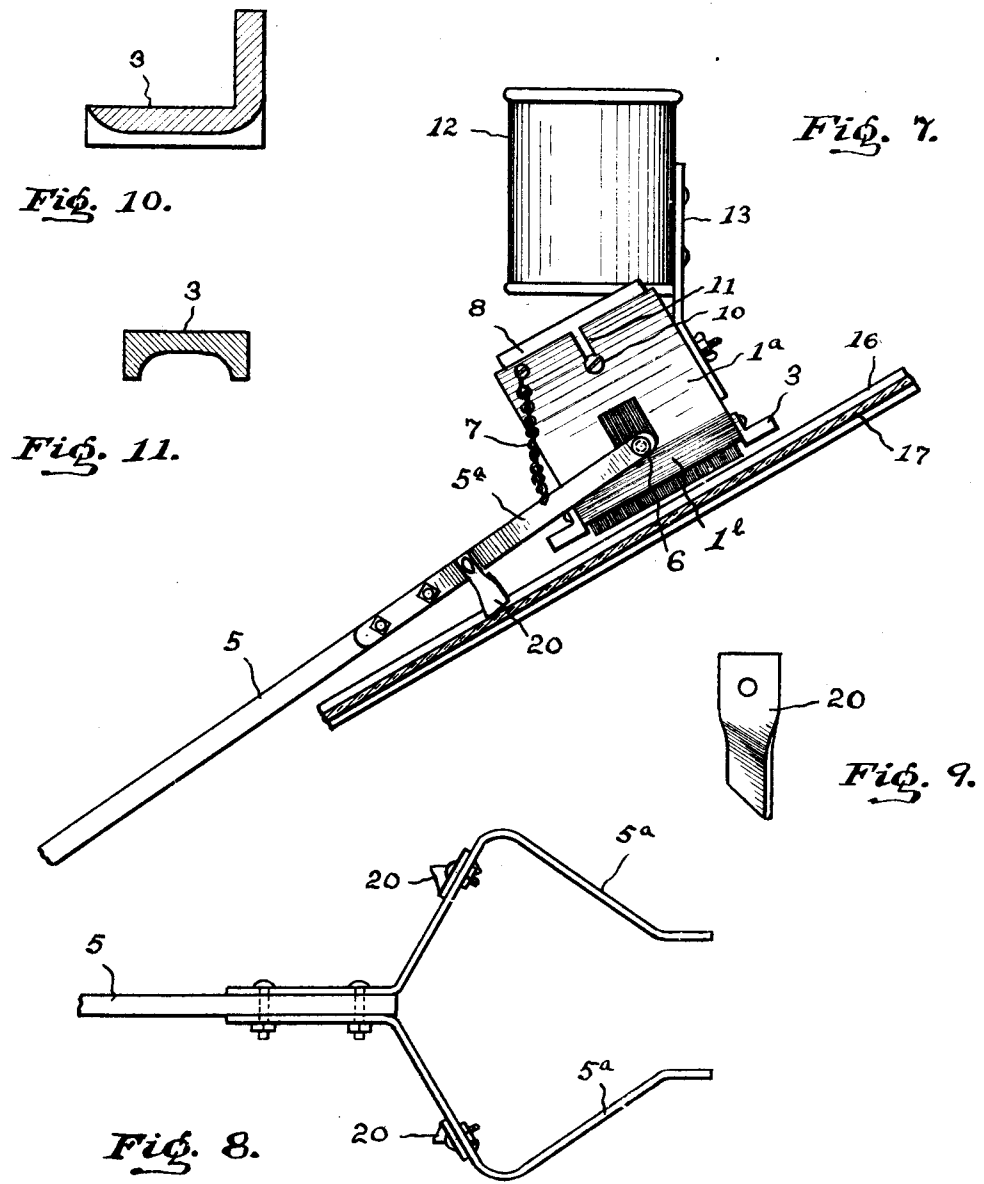
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UNITED STATES PATENT OFFICE.

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GREENHOUSE-BAR PAINTER.

Application filed September 14, 1925. Serial No. 56,247.

The present invention relates to a device for painting greenhouse rafters or similar bars, and has for its object to provide a device of this character which embodies novel features of construction whereby the exposed surface of the rafter or bar can be easily and quickly painted with a minimum amount of labor and expense.

Where greenhouse rafters are painted by hand it is usually necessary to erect a scaffold over the house and move the scaffold as the painting progresses, and it will be readily understood that where the greenhouses cover any appreciable area this is rather a slow and costly process. It is necessary, however, to paint these bars at more or less frequent intervals in order to preserve the material and maintain a tight joint with the glass, although where the painting is done by hand the operation is so tedious and expensive that the painting is frequently neglected and is seldom done as often as is desirable for the maintenance of the house.

According to the present invention a paint feeding and distributing means is provided upon a carriage which is mounted so that it can be moved longitudinally along the greenhouse bars with the operator standing in the gutter or at one side of the house so that there is no need of erecting a scaffold. Even an unskilled operator can manipulate the device and paint a large number of the greenhouse rafters or bars in a short period of time.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a side elevation of a bar painting device which is constructed in accordance with the invention, showing the same as mounted to travel along a greenhouse rafter.

Figure 2 is an enlarged transverse sectional view on the line 2—2 of Fig. 1, looking in the direction of the arrows.

Figure 3 is a similar view on the line 3—3 of Figure 1.

Figure 4 is a bottom plan view of one of the brush elements.

Figure 5 is a side elevation thereon.

Figure 6 is a top plan view of the brush.

Figure 7 is a side elevation of the bar painting device showing the position as-

sumed by the carriage when it is lifted above the glass by means of the fulcrum members with which the handle is provided.

Figure 8 is a plan view of the bifurcated end of the handle showing the manner of applying the fulcrum members thereto.

Figure 9 is a detail view of one of the fulcrum members.

Figure 10 is an enlarged longitudinal sectional view through one of the channel shaped guide members which are provided at the ends of the carriage.

Figure 11 is a transverse sectional view through the same.

Corresponding and like parts are referred to in the following description and indicated on all of the views of the drawings by like reference characters.

Referring to the drawings the numeral 1 designates the frame of the carriage which has a trough shaped formation being substantially V-shaped in cross section. The sides 1^a of the carriage converge downwardly to an elongated opening 2, which extends along the full length of the carriage at the bottom thereof. The ends of the carriage are provided with the channel shaped guides 3 which may be detachably secured to the carriage in any suitable manner as by means of the screws 4. The opening 2 is in alignment with the guides 3, and the latter are of the proper size to straddle and ride a greenhouse rafter, thereby directing the carriage in its movements as it is caused to travel along the rafter.

A handle 5 is utilized for moving the carriage and this handle has a bifurcated end 5^a which is pivotally secured to opposite sides of the carriage by pivot pins or screws 6. The handle is thus free to swing up and down relative to the carriage, although it is movable laterally with the carriage so that the carriage can be supported in an upright position by means of the handle. A flexible cord or chain 7 connects the carriage to the handle so as to limit the relative swinging movement of the handle and prevent the carriage from swinging over into an inverted position when it is lifted from the greenhouse bar by means of the handle.

Arranged within the carriage frame are brushes 8 which are loosely mounted upon the sides 1^a of the frame with the bristles

projecting through the opening 2. The brushes are mounted so that they can move freely up and down and the head of each brush may be provided with suitable weights 9 for holding the brush in proper engagement with the work. The head of each brush is also shown as provided with a headed stud 10 which engages a slot 11 in the corresponding side 1^a of the carriage frame in the top thereof. The slots 11 open through the upper edges of the sides 1^a of the carriage so that when the brushes 8 are inserted in position the shanks of the headed studs 10 are received within the slots, the heads of the studs overhanging the slots and serving to hold the brushes against the respective sides of the carriage. The brushes are, however, free to slide up and down so that the bristles can accommodate themselves to the work. It has been found that this manner of mounting the brushes is far more effective than clamping them rigidly upon the carriage, for the reason that the guide members 3 at the ends of the carriage can ride over raised or depressed portions without either lifting the brushes from the work or causing them to bear too heavily upon the work. The brushes can, however, be readily removed from the carriage or replaced therein at any time without difficulty.

A suitable reservoir 12 is mounted upon the carriage 1, being supported by a bracket 13 which is secured to one end of the carriage. The reservoir is arranged above the brushes when the device is in operative position, and a feed pipe 14 leads from the reservoir to a point over the middle portion of the bottom opening 2 of the carriage. A valve 15 is provided for the feed pipe 14 and this valve can be adjusted so that the paint in the reservoir will drop upon the greenhouse rafters and be fed to the brushes in proper quantity for painting the rafters. The inner sides of the brushes preferably have cut-away portions 8^a which provide a clearance space directly under the end of the said tube 14 so that the paint is permitted to drop directly upon the greenhouse rafters and is then distributed by the brushes. It has been found that more satisfactory results are obtainable in this manner than by feeding the paint to the bristles, since where the paint is fed to the bristles the brushes are so fully charged with paint that if a small nail or like obstruction is encountered there is a tendency to deposit a pool of the paint.

The carriage 1 is supported at the end of the handle 5, so that while it is free to swing about its pivotal connection with the handle it is prevented from tipping over laterally. The valve 15 of the feed pipe is adjusted so that paint will be fed to the greenhouse bar in the required quantity for painting the same. The channel guides 3 are caused

to engage the greenhouse rafter and the carriage is then moved along the greenhouse rafter or reciprocated upon the same by means of the handle 5, said handle providing a means both for moving the carriage and also for maintaining it in an upright position upon the bar. The carriage can be reciprocated freely so that the paint will be well brushed and distributed, and the work is done much more thoroughly than it is usually done by hand. The brushes 8 are mounted so that they can move freely up and down and the weights 9 cause the brush bristles to bear against the greenhouse bar at all times when the carriage is in position thereon. The brushes are free to accommodate themselves to any inequalities in the surface being painted, and the guide members 3 at the ends of the carriage can ride over raised or lowered portions without lifting the brushes from their work or causing them to bear too heavily thereon.

The carriage must of necessity be arranged above the rafter or bar being painted, for the reason that the sides of the rafter or bar, such as the one indicated at 16 on the drawings, are connected to the panes of glass 17. The carriage thus has the center of gravity thereof above the rafter or bar being painted so that it is necessary to connect the handle 5 thereto in such a manner that it can be utilized both for the purpose of holding the carriage in an upright position and also for moving the carriage back and forth along the greenhouse bar. The cord or chain 7 enables the carriage to be lifted from the greenhouse bar and shifted from one position to another position without having the carriage swing downwardly about its pivotal connection with the handle into an inverted position. The use of this device enables greenhouse rafters to be quickly painted at slight expense with unskilled labor and avoids the tedious and expensive process of painting by hand as this work has previously been done.

The side walls 1^a of the trough shaped carriage are converged downwardly toward the opening tube, as previously described, and the portions 1^b of the side walls which are adjacent to the opening 2 are deflected inwardly at a sharper angle. These sharply deflected portions 1^b of the side walls engage the bristles of the respective brushes at points toward the ends thereof and tend to deflect the bristles inwardly so that they are somewhat compressed and act in a more effective manner to distribute the paint over the top and the sides of the green bar rafter and brush it into the surface. The brushes 8 fit flat against the portions 1^a of the side walls so that the portions 1^b of the side walls are disposed in an angular relation to the general direction of the brushes and serve

both to support the brush bristles and deflect them inwardly so that the bristles are brought together into a closer relation and operate in an effective manner to distribute the paint.

The two arms of the bifurcated end 5^a of the handle are provided with downwardly projecting fulcrum members 20 which are normally held above the glass in inoperative position so that they do not interfere in any manner with the operation of the bar painting device. In the event the carriage becomes accidentally disengaged from the bar or rafter when it is at the upper end of the house and at a distance from the operator, the handle 5 can be swung downwardly to bring the fulcrum members 20 into engagement with the glass and lift the carriage above the glass and bar being painted. While the carriage is thus lifted above the glass and bar it can be easily shifted laterally by swinging the handle to bring it into position directly over the bar so that it will engage the bar in the correct manner when it is lowered. This renders it easy to bring the carriage back into proper engagement with the bar in the event it jumps the bar at the upper end of the house. Where the handle is provided with these fulcrum members 20 it is an easy matter to lift the carriage a sufficient amount to position it properly upon the bar at any time.

As shown by Figures 10 and 11 the channel shaped guide members 3 are comparatively wide and preferably flared at the sides and ends thereof so that they can readily adjust themselves to different widths of bars and will have no difficulty in riding over accumulations of putty and other inequalities at the top and sides of the bar.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is,

1. A device for painting greenhouse bars and the like, including a carriage, guide means upon the carriage for engaging the bar to direct the carriage in its movements along the same, converging brushes loosely mounted upon the carriage to slide freely up and down, weights on the brushes for holding the bristles thereof in a yieldable engagement with the top and opposite sides of the bar by the action of gravity, and paint feeding means.

2. A device for painting greenhouse bars and the like, comprising a carriage having a slot in the bottom thereof and side walls which converge downwardly to the slot, guide means upon the carriage for engaging the bar to direct the carriage in its movements along the same, converging brushes loosely mounted upon the side walls of the carriage so that they slide freely up and down thereon, the bristles of the brushes extending downwardly through the opening

in the bottom of the carriage in a converging relation to engage the top and opposite sides of the bar, weights on the brushes for holding the bristles thereof in a yieldable engagement with the work by gravity, and paint feeding means upon the carriage.

3. A device for painting greenhouse bars and the like, comprising a carriage having a side wall formed with a slot, guide means upon the carriage for engaging the bar to direct the carriage in its movements along the same, a brush loosely mounted upon the carriage so that it is movable freely up and down thereon, a weight on the brush for holding the bristles thereof in a yieldable engagement with the bar by the action of gravity, a stud projecting from the brush and engaging the slot of the side wall of the carriage to direct the brush in its movements, and paint feeding means upon the carriage.

4. A device for painting greenhouse bars and the like, comprising a carriage having a side wall which has an edge portion thereof deflected into an angular position, guide means upon the carriage for engaging the bar to direct the carriage in its movements thereon, a brush mounted upon the side wall of the carriage and having the bristles thereof deflected inwardly into a closer relation with each other by the above mentioned angularly disposed portion of the side wall, the ends of the bristles engaging the bar when the guide means is in operative position, and the paint feeding means upon the carriage.

5. A device for painting greenhouse bars and the like, comprising a trough shaped carriage having an opening in the bottom thereof and side walls which converge toward the opening, the portions of the side walls adjacent to the opening being deflected inwardly at a sharper angle, guide means upon the carriage for engaging the bar to direct the carriage in its sliding movements thereon and support the carriage with the opening thereof over the bar, brushes mounted upon the converging side walls and having the bristles thereof projecting through the opening into engagement with the bar to be painted, the sharply deflected portion of the side walls adjacent the opening serving to deflect the brush bristles inwardly to hold the bristles of the brushes in a closer relation to each other, and paint feeding means upon the carriage.

6. A device for painting greenhouse bars and the like, including a carriage, paint feeding means upon the carriage, a handle extending from one end of the carriage, and a fulcrum member projecting from the handle for engagement with the roof to lift the carriage.

7. A device for painting greenhouse bars and the like, including a carriage, guide

means upon the carriage for engaging the bar to direct the carriage in its movements along the same, paint feeding means upon the carriage, a handle projecting from the carriage, and a fulcrum member upon the handle for engagement with the roof to lift the carriage.

8. A device for painting greenhouse bars and the like, comprising a carriage, guide means on the carriage for engaging the bar to direct the carriage in its movements, paint feeding means upon the carriage, a handle pivotally connected to the carriage and extending from one end thereof, and a fulcrum

member upon the handle for engagement with the roof to lift the carriage. 15

9. A device for painting greenhouse bars and the like, comprising a carriage, guide means for engaging the bar to direct the carriage in its movements along the same, paint feeding means upon the carriage, a handle having a bifurcated end which is pivotally connected to the carriage, and fulcrum members projecting from the arms of the bifurcation for engagement with the roof to lift the carriage. 20 25

In testimony whereof I affix my signature.

ROY S. THOMPSON.