Feb. 14, 1928. 1,659,440

J. PAGES

PLASTERING MACHINE

Filed March 5, 1927 2 Sheets-Sheet 1

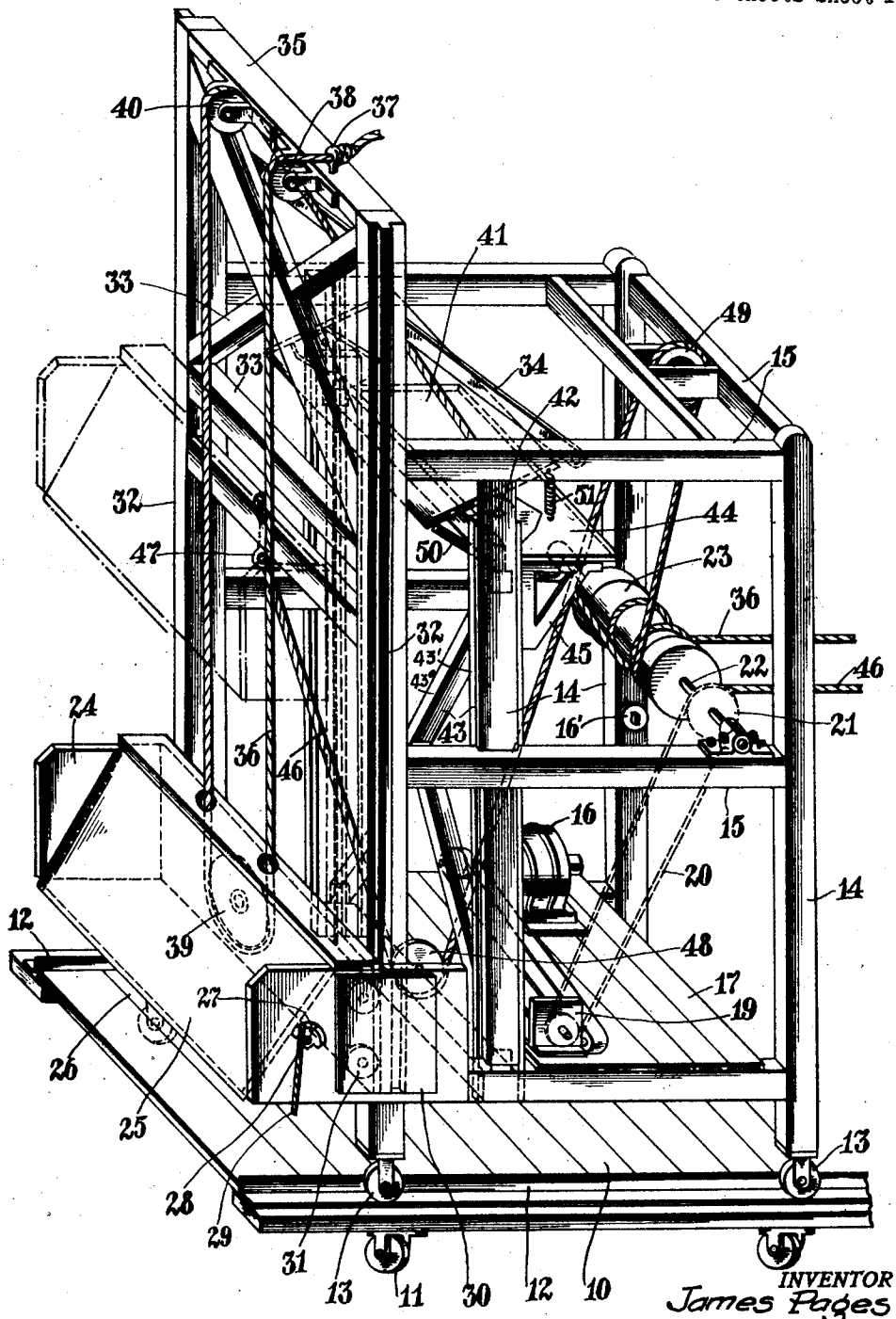


Fig. 1.

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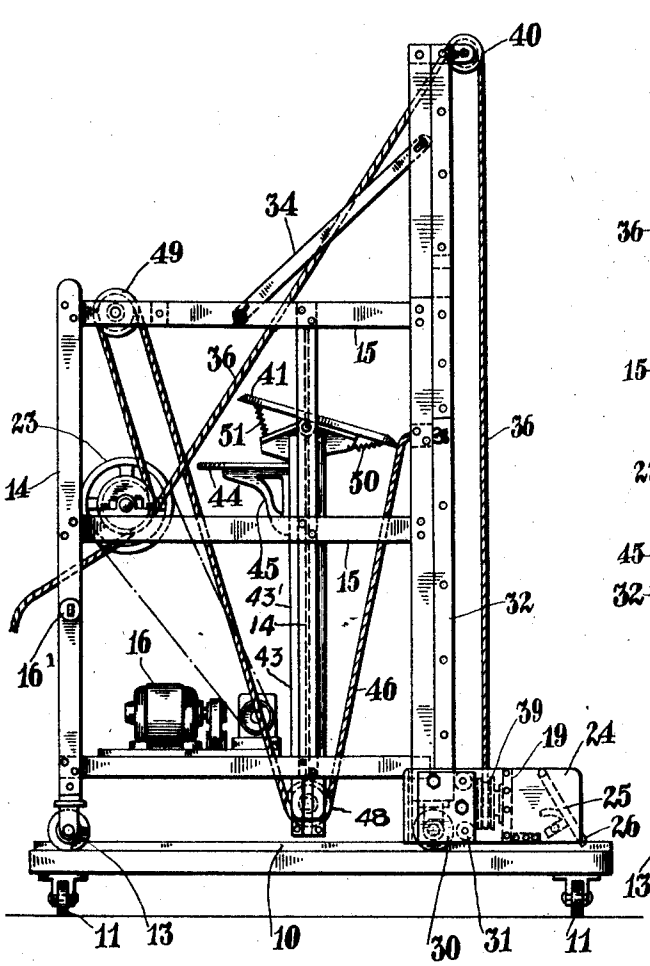


Fig. 2.

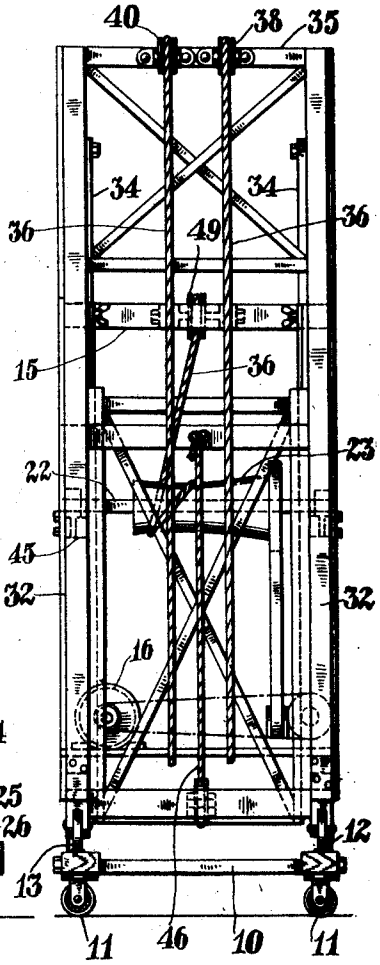


Fig. 3.

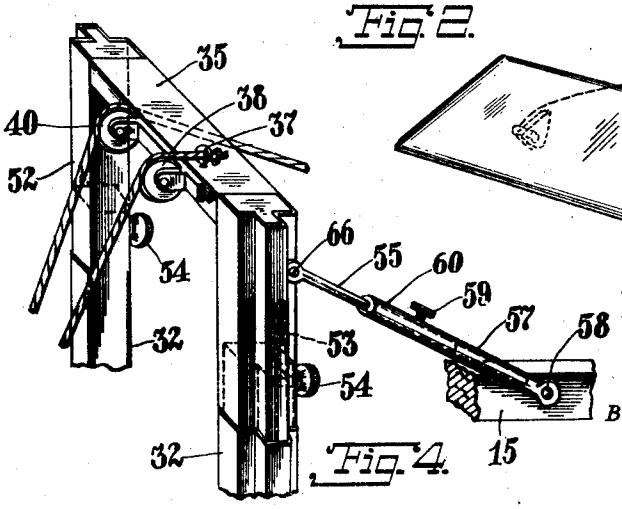


Fig. 4.

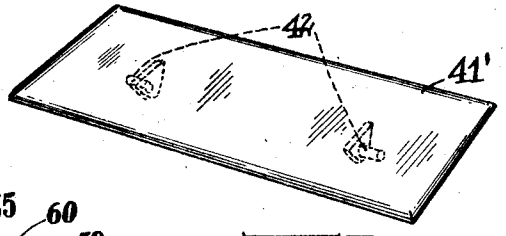


Fig. 5.

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UNITED STATES PATENT OFFICE.

JAMES PAGES, OF BROOKLYN, NEW YORK.

PLASTERING MACHINE.

Application filed March 5, 1927. Serial No. 172,941.

This invention relates to a new and useful device in the nature of a plastering machine adapted for applying plaster to walls and ceilings.

The object of the invention is to provide a plastering machine of novel construction and arrangement of parts, hereinafter more fully described, claimed and illustrated in the accompanying drawings.

Fig. 1 is a perspective view of my improved plastering machine.

Fig. 2 is a side elevational view thereof.

Fig. 3 is a front elevational view thereof, showing the wall box and ceiling plate removed.

Fig. 4 shows a fragmentary perspective view of a means of extending the supplementary frame work as embodied in my improved device.

Fig. 5 is a perspective view of a ceiling plate embodied in my invention.

As here embodied my improved machine comprises a platform 10, mounted on the rollers 11. The platform 10, has attached thereto, flanged members 12, adapted to guide the rollers 13, attached to the frame work 14. The above described construction being such as will permit the platform 10 to be pushed or pulled in one direction, and which will permit the frame work 14, to be pushed or pulled on the platform 10, in a direction at right angles to the said platform 10.

The frame work 14, comprises a plurality of upright members and suitable cross members 15, so as to provide a suitable structure or supporting means. The electric motor 16, is of ordinary construction, and is mounted on the base member 17, of the frame work 14. The motor 16 is operatively connected by means of suitable electric wires to any convenient source of electric current, and to the switch 16′ mounted on the upright member 14 of the said frame work. The belt 18 is extended over a pulley attached to the armature shaft of the motor 16, and over a pulley operatively attached to a speed reduction device 19, comprising the usual reduction gears. The belt 20 is extended over a pulley operatively attached to the speed reduction device 19 and over a pulley 21 attached to the shaft 22 rotatively mounted in brackets attached to the cross members 15. The drum 23 is attached to the shaft 22.

The wall box 24 is provided with an open top and side and has hinged thereto at its top a plaster member 25, having its lower free edge 26 projecting somewhat beyond the wall box 24. The cam 27 is pivotally mounted on the side of the wall box 24, and has attached thereto a lever 28. The flexible member 29, a cord or the like, is attached to the lever 28, and is extended downwardly therefrom. The wall box 24, has attached thereto plate members 30. The rollers 31 are rotatively mounted on shafts carried by the plate members 30. The plate members 30, are provided with extended members adapted to engage the upright members 32, of the supplementary frame work. The rollers 30 being in contact with one surface of the upright members 32. The above described construction being such as will permit the wall box 24 to be slidably mounted on the said supplementary frame. The said supplementary frame comprises the upright members 32, and the cross members 33, attached thereto. The supplementary frame is attached by bolts, screws, or the like, to the above mentioned frame work, so as to be readily and easily removed therefrom. The brace members 34, are similarly attached thereto, for the same purpose. The flexible member 36, is attached, as at 37, to the top cross member 35, and is extended over the pulley 38 rotatively mounted in a bracket attached to the said cross member 35. The flexible member 36, is extended downwardly and over the pulley 39, rotatively mounted in a bracket attached to the wall box 24. The flexible member 36, is extended upwardly from the pulley 39, over the pulley 40, rotatively mounted in a bracket attached to the cross member 35. The flexible member 36, is extended from the pulley 40, over the above mentioned drum 23, and is wound around the drum 23 and extended therefrom, having its free extremity within close proximity to the platform 10. The above described construction being such as will permit the wall box 24 to be slidably raised on the upright members 32, by the electric motor 16, when the free extremity of the flexible member 36 is pulled tightly. The plaster member 25, is adapted to hold plaster or the like, which is spread on the wall of a room, the side of a house, or any vertical surface to be plastered, when the wall box 24 is slidably raised as above set forth. It being understood that the plaster board

25 may be relatively hinged inwardly or outwardly, as may be desired by manual manipulation of the flexible member 29, so as to facilitate the spreading of the plaster on the said vertical surface. It being understood that the wall box 24, may be lowered, when the free extremity of the flexible member 36 is released, or loosened. The board 25 may be raised and plaster manually placed in the box 24.

A secondary frame 43 is disposed in substantially vertical position on the main frame and is adapted to be raised and lowered in a vertical plane relative to the main frame. The secondary frame 43 comprises side members 43′ which are provided with grooves or channels in which upright supports 14 of the main frame are disposed. It should be understood that there are two such side members 43′ which are slidably mounted on opposite upright supports of the main frame and are rigidly secured together by diagonally disposed cross members 43ª. A rod 42 is disposed across the upper end of the second frame 43 and is provided with a pivotally mounted ceiling plate 41 which is pivotally attached to said rod near its center. A shelf 44 is also attached to the secondary frame 43 by brackets 35, a flexible member or cord 46 is attached at one end, as at 47 to a cross member 33 of the main frame and is extended downwardly therefrom around a pulley 48 attached to the bottom portion of the secondary frame 43. It should be understood that the slidably mounted secondary frame 43 may be raised and lowered for suitably positioning the ceiling plate adjacent the ceiling of a building being worked upon by manipulation of the rope 46 as hereinafter more clearly set forth. The flexible member 46, is extended upwardly from the pulley 48, over the pulley 49, rotatively mounted in a bracket attached to the cross member 15 of the said frame work. The flexible member 46, is extended downwardly from the pulley 49 over the above mentioned drum 23, and is wound around the drum 23, and extended therefrom, having its free extremity within close proximity to the platform 10. The above described construction being such as will permit the secondary frame work 43, and the ceiling plate 41 to be slidably raised, by the electric motor 16, when the free extremity of the flexible member 46 is pulled tightly.

The tension springs 50 and 51, are attached to the ceiling plate 41, at or near the opposite extremities thereof, and are adapted to be attached to the secondary frame work 43. The latter described construction being such as will permit the ceiling plate 41, to be held at an angle, or inclined, relative to the secondary frame 43, so as to hold either extremities of the ceiling plate 43, in an upwardly extended angular position. The above described construction being such as will permit plaster manually placed on the ceiling plate 41, to be spread on the ceiling of a room, or on a similar horizontal surface, when the ceiling plate 41, is raised the required height, and when my improved machine is pushed or rolled along the floor or ground.

In Fig. 4 of the accompanying drawing, I have shown the above described supplementary frame work, provided with an extended member comprising upright members 52, adapted to slidably engage the said upright members 32. The upright members 52 having formed therein elongated slots 53, adapted to receive the threaded members 54, are thereadedly attached to the upright members 32, as a means of holding the above mentioned extended member in any desired extended position above the said supplementary frame work, as may be required to accommodate walls having a high ceiling. I have also provided a telescopic brace member comprising a rod 55, pivotally attached, at at 56, to the upright member 52. The tubular member 57 is adapted to slidably engage the rod 55. The tubular member 57 is pivotally attached, as at 58, to the cross member 15 of the said frame work. The threaded member 59 is threadedly attached to the rod 55, and is adapted to engage in an elongated slot 60 formed in the tubular member 57, as a means of holding the telescopic brace member in any desired extended position, so as to securely hold the said upright members 52 in place.

Having thus describd my invention what I claim as new and desire to protect by Letters Patent of the United States is as follows:

1. A plastering machine of the class described comprising a horizontal base platform, rollers on said base platform for facilitating moving thereof, tracks mounted on the upper side of said base platform, a main frame comprising rollers mounted on said tracks adapted to be moved laterally of said base platform, spaced apart upright guide members on said main frame, a plaster box movably mounted on said main frame comprising an inclined wall adapted to deflect plaster therein to the open side of said plaster box, a pulley rotatively mounted on said plaster box, pulleys rotatively mounted on said main frame, and a flexible member secured to said main frame at one end and disposed around the pulley of said plaster box and the pulleys of said main frame adapted to raise said plaster box relative to said upright guide members for discharging plaster from the open end of said plaster box and applying the same to a vertical wall, said main frame being adapted to be positioned relative to the wall being plastered by movement there-

of on said tracks for predetermining the thickness of the layer of plaster being applied to said wall.

2. A plastering machine of the class described comprising a horizontal base platform, rollers on said base platform for facilitating moving thereof, tracks mounted on the upper side of said base platform, a main frame comprising rollers mounted on said tracks adapted to be moved laterally of said base platform, spaced apart upright guide members on said main frame, a plaster box movably mounted on said main frame comprising an inclined wall adapted to deflect plaster therein to the open side of said plaster box, a pulley rotatively mounted on said plaster box, pulleys rotatively mounted on said main frame, a flexible member secured to said main frame at one end and disposed around the pulley of said plaster box and the pulleys of said main frame adapted to raise said plaster box relative to said upright guide members for discharging plaster from the open end of said plaster box and applying the same to a vertical wall, said main frame being adapted to be positioned relative to the wall being plastered by movement thereof on said tracks for predetermining the thickness of the layer of plaster being applied to said wall, a vertical frame slidably mounted on said main frame, a ceiling plate pivotally mounted on said slidably mounted vertical frame, a pulley on said vertical frame, and means comprising a flexible member disposed around said pulley and attached at its extremity to said main frame adapted to raise said slidably mounted vertical frame relative to said main frame for adjustably positioning said ceiling plate in close proximity to a ceiling being plastered, said main frame being adapted to be moved on the tracks of said base platform for moving said ceiling plate from one portion to another portion of said ceiling.

3. A plastering machine of the class described comprising a horizontal base platform, casters on said base platform for facilitating movement thereof, tracks on the upper side of said platform, a main frame supported on said platform, rollers on said main frame guided on said tracks adapted to guide the movement of said main frame relative to said base platform, a secondary frame slidably mounted on said main frame adapted to be raised relative thereto, a ceiling plate for applying plaster to a ceiling pivotally mounted on the upper end of said secondary frame, springs attached to said secondary frame at one and to said ceiling plate at their other ends for normally holding the latter substantially in a horizontal plane, a pulley on said main frame, and a cord disposed around said pulley and attached at one of its extremities to said main frame adapted to raise said secondary frame relative to said main frame for suitably positioning said ceiling plate relative to the ceiling being worked upon to predetermine the thickness of the layer of plaster being applied to said ceiling, said ceiling plate being adapted to be moved in a straight path relative to said ceiling by movement of said main frame on said tracks.

In testimony whereof I have affixed my signature.

JAMES PAGES.