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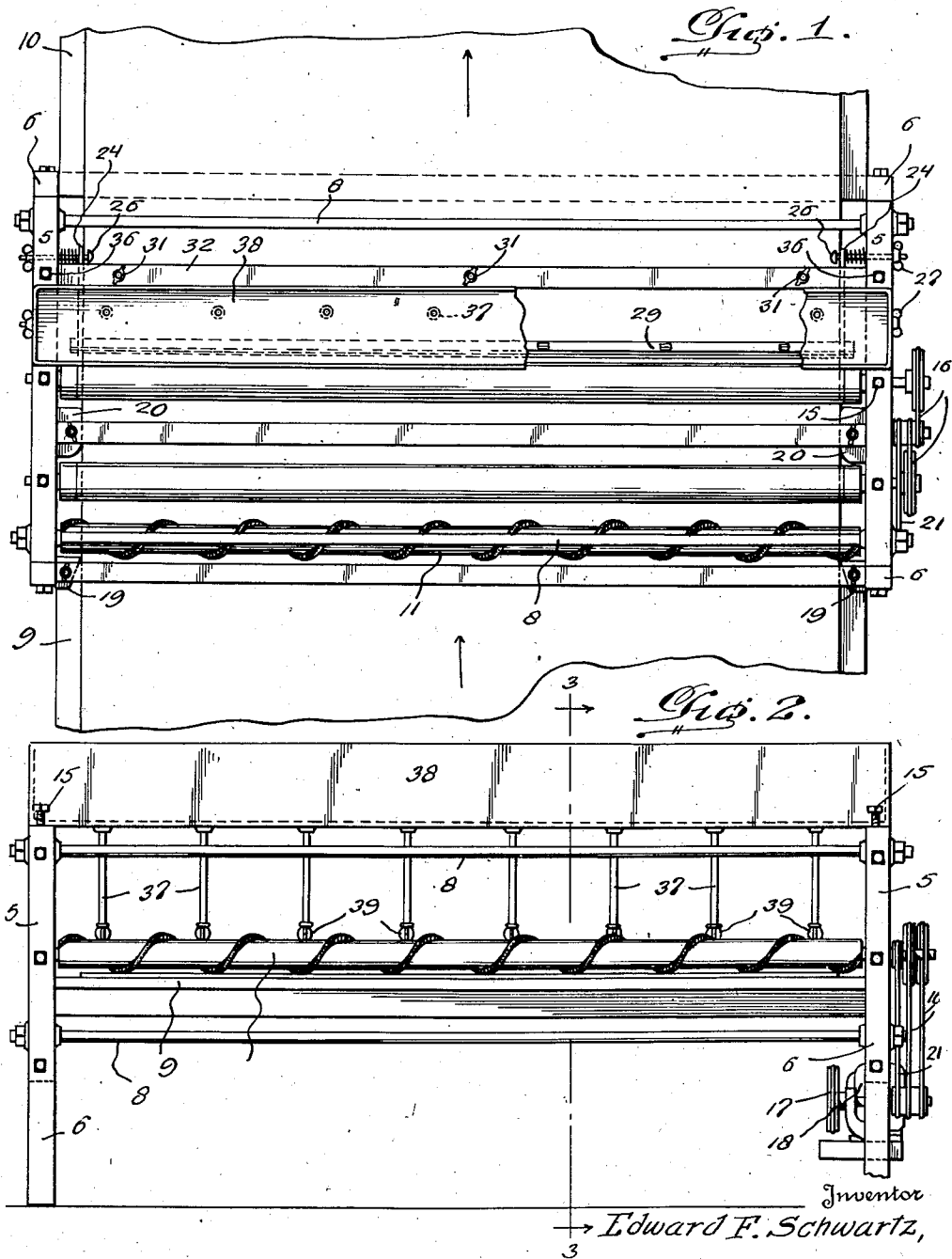
E. F. SCHWARTZ

2,354,777

PAINTING MACHINE

Filed Dec. 31, 1942

3 Sheets-Sheet 1



By

Stanley Burch

Attorney

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3 Sheets-Sheet 2

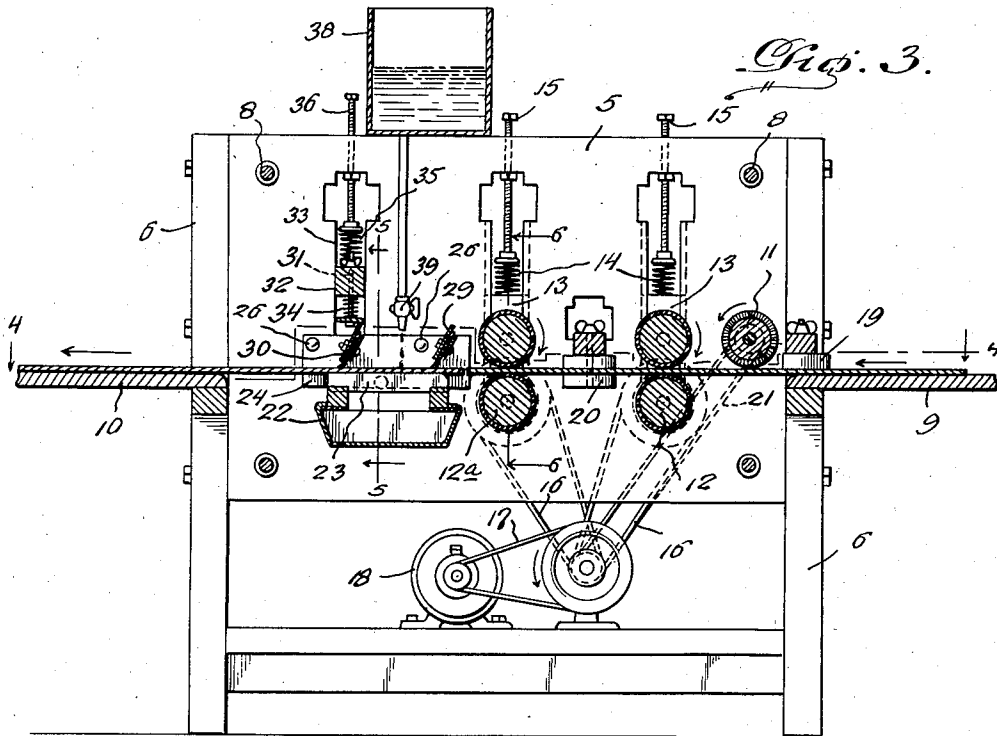
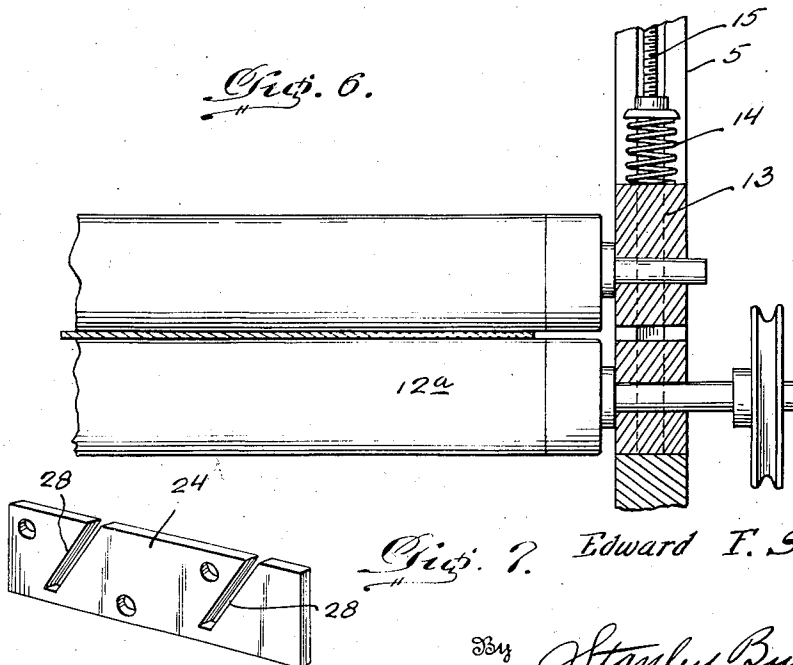


Fig. 7. Edward F. Schwartz,

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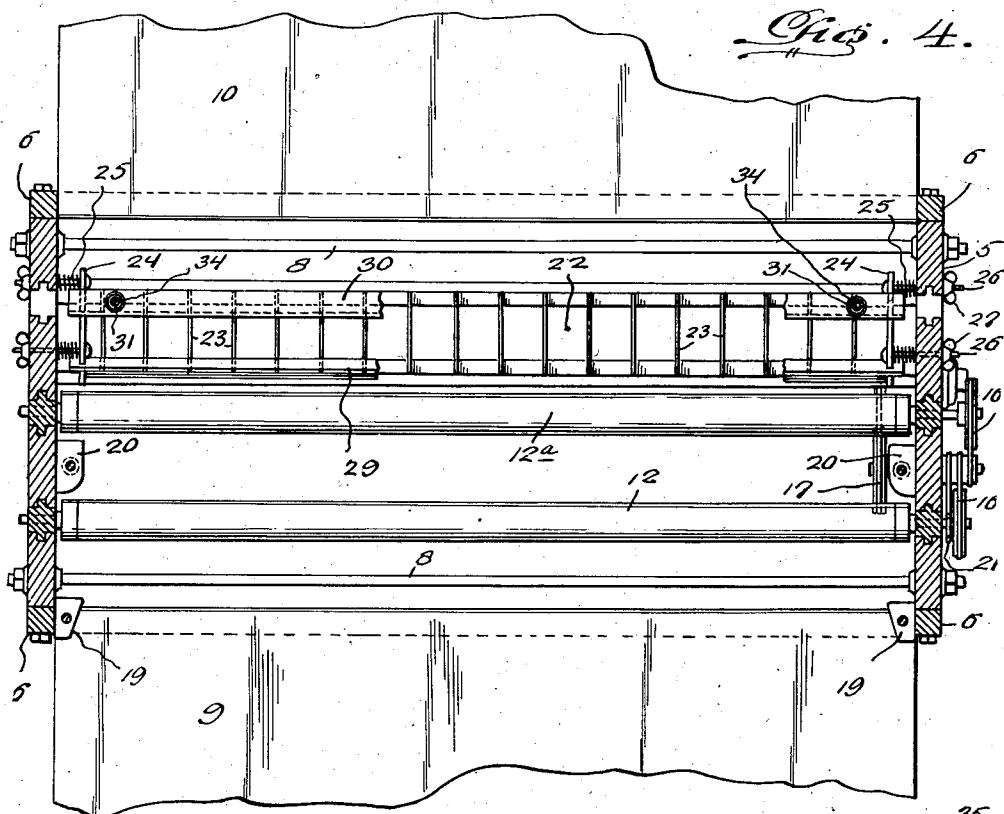
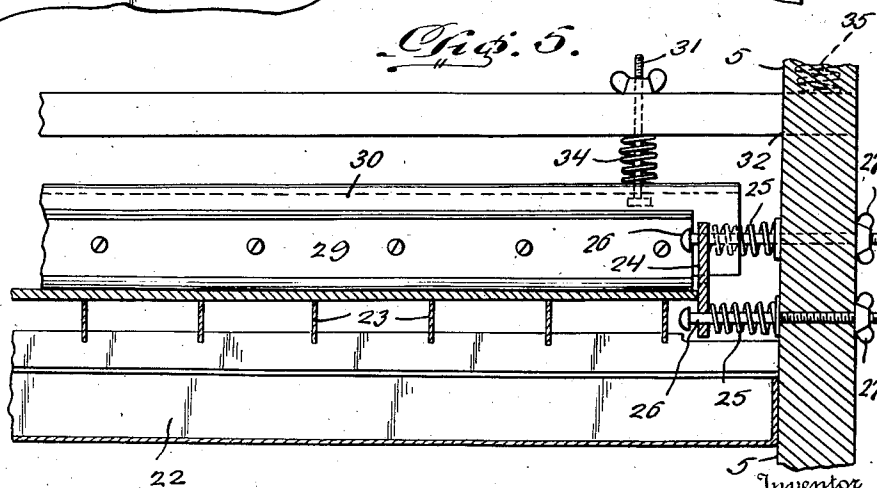
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,354,777

PAINTING MACHINE

Edward F. Schwartz, San Francisco, Calif.

Application December 31, 1942, Serial No. 470,856

2 Claims. (Cl. 91—30)

This invention relates to painting machines, and has particular reference to a machine for applying a coat of paint to a surface of successive strips of plywood or the like.

The primary object of the present invention is to provide a relatively simple and inexpensive machine for continuously applying a coat of paint to successive strips or boards of plywood, provision being made to brush the surface clean immediately prior to applying the paint thereto, and further provision being made for insuring the application of a uniform coat of paint to the surface of each board.

A more specific object of the present invention is to provide a machine of the above kind which shall be extremely simple and durable in construction, highly efficient in operation, and easy to operate.

With the above and other objects in view, the present invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:

Figure 1 is a top plan view of a painting machine constructed in accordance with the present invention, partly broken away.

Figure 2 is an end elevational view of the machine as seen looking towards the left of Figure 3, parts being broken away.

Figure 3 is a longitudinal vertical section taken on line 3—3 of Figure 2.

Figure 4 is a horizontal section taken on line 4—4 of Figure 3.

Figure 5 is a fragmentary vertical transverse section taken on line 5—5 of Figure 3 and drawn on an enlarged scale.

Figure 6 is a similar view taken on line 6—6 of Figure 3.

Figure 7 is a perspective view of one of the guide plates that are yieldingly pressed against the side edges of the plywood boards and which cooperate with the squeegees to form the paint reservoir.

Referring in detail to the drawings, the present machine consists of a suitable frame embodying a pair of spaced side plates 5 provided with end supporting legs 6 and rigidly connected in spaced parallel relation by means of transverse connecting rods or bolts 8. At one end of this frame and located at a suitable elevation is a feeding table 9, while a delivery table 10 is provided at a corresponding elevation at the other end of the frame. The space between the tables 9 and 10 is open and in this space adjacent the

feeding table 9 is arranged a rotary brush 11 whose shaft is journaled in the side plates 5 and which is disposed to brush dirt or other foreign matter from the upper surface of the plywood board as it passes from the feeding table 9 toward the table 10. Inwardly of the brush 11 are a plurality of pairs of spring rollers 12 and 12a journaled transversely of the frame in position to have the plywood boards pass therebetween and fed thereby toward the receiving table 10. The upper rollers of each pair are yieldingly pressed downwardly into contact with the upper surface of the plywood board, and for this purpose the shafts of the upper rollers are journaled in vertically yieldable blocks 13 that are pressed downwardly by means of springs 14. The tension of the springs 14 may be adjusted by means of adjusting screws 15 so that the pressure of the upper rollers of the pairs of feed rollers upon the plywood boards may be properly regulated. The feed rollers of each pair are suitable intergeared, and the lower rollers of each pair are power driven by suitable means such as belt gearing 16 and 17 from a suitable motor 18 mounted in the frame below the level at which the plywood board passes through the machine. In order to center the plywood boards as they pass through the machine, suitable guide blocks may be provided as at 19 where the plywood boards pass from the feeding table 9 and as at 20 between the pairs of feed rollers 12 and 12a. Also, belt gearing 21 may be provided so that the motor 18 will also drive the rotary brush 11 in the proper direction for brushing dirt and other foreign matter from the plywood boards in a direction away from the feed rollers 12. At a point between the feed rollers 12 and the receiving table 10, a drip pan 22 is mounted to extend transversely from side to side of the frame of the machine at a level directly below that at which the plywood boards pass from the feed rollers to the receiving table 10. Directly above this drip pan are a series of transversely spaced vertically disposed and longitudinally arranged strips or elongated plates 23 whose upper edges are in the same horizontal plane and serve to support the plywood boards as they pass above the drip pan 22. Located at opposite sides of the machine directly above the drip pan 22 are a pair of further plates 24 that are yieldingly urged inwardly so as to engage the side edges of the plywood boards as they pass at this point. Suitable means is provided for yieldingly urging the plates 24 inwardly, such as compression springs 25 encircling bolts 26 passing through the side frame plates 25 and adjustable

to vary the tension of springs 25, such as by means of wing nuts 27 threaded on the outer ends of said bolts 26. The plates 24 have inclined slots 28 extending downwardly from the upper edges thereof and in which are inserted the ends of squeegees 29 and 30. The squeegees 30 are suitably carried by bolts 31 depending from a vertically adjustable bar 32 movable in vertical slots 33 provided in side frame plates 5, compression springs 34 being interposed between the bar 31 and squeegee 30 to yieldingly press the latter downwardly into contact with the plywood boards as they pass under the squeegee 30. The bar 32 is yieldingly pressed downwardly by means of further springs 35 whose tension may be adjusted by adjusting screws 36. It will thus be seen that a reservoir is created in the space between the squeegees 29 and 30 and the side plates 24 so that a supply of paint may be deposited in this reservoir and upon the upper surface of the plywood board as it passes through the machine. The paint in this reservoir is fed evenly on the surface of the plywood board by the squeegee 30 as said plywood board passes from the latter to receiving table 10, undue escape of paint from the reservoir being prevented by the squeegee 29 and plates 24. Some excess paint will drip into the drip pan 22.

The paint may be supplied to the above mentioned reservoir by means of a series of pipes 37 extending from a main paint reservoir or tank 38 and provided at their lower ends with suitable valves 39 whereby the flow of paint through the reservoir may be regulated in a desirable manner.

In operation, the valves 39 are opened to a degree so that the paint is allowed to drip into the reservoir between the squeegees 29 and 30 and the side pressure plates 24. The plywood boards are then fed into the machine from the feeding table 9 so as to pass under the rotary brush 11 for having dirt and foreign matter brushed therefrom. The boards then pass on between the feed rollers 12, being centered between the sides of the machine by the guide blocks 19 and 20. The rollers 12 and then the rollers 12a subsequently act to feed the boards further on beneath the squeegees 29 and 30, the squeegee 30 causing the paint

in the reservoir to be spread on the upper surfaces of the plywood board so that only a thin coat will be left thereon as said plywood boards pass from squeegee 30 to the receiving table 10. An attendant may start the boards into the machine at the table 9, while another attendant may remove them from the table 10, and it will thus be seen that a number of plywood boards may be successively painted in a continuous manner by the use of the present machine.

From the foregoing description, it is believed that the construction and operation, as well as the advantages of the present invention, will be readily understood and appreciated by those skilled in the art. Minor changes may be made in details of construction illustrated and described, such as fall within the spirit and scope of the invention as claimed.

What I claim as new is:

1. In a machine for painting plywood boards, means to create a paint reservoir upon the upper surfaces of the plywood boards as they pass through the machine, said means comprising a pair of spaced squeegees engageable with the upper surfaces of said plywood boards and forming front and rear walls of the reservoir, and pressure plates urged inwardly to yieldingly engage the opposite side edges of said plywood boards and forming side walls of said reservoir.
2. In a machine for painting plywood boards, means to create a paint reservoir upon the upper surfaces of the plywood boards as they pass through the machine, said means comprising a pair of spaced squeegees engageable with the upper surface of said plywood boards and forming front and rear walls of the reservoir, and pressure plates urged inwardly to yieldingly engage the opposite side edges of said plywood boards and forming side walls of said reservoir, one of said squeegees being arranged to spread the paint so that it will remain in a thin coat on the plywood boards as they pass from the reservoir, and yieldable means for pressing the last named squeegee downwardly toward the upper surface of said plywood boards.

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