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STRIPING DEVICE

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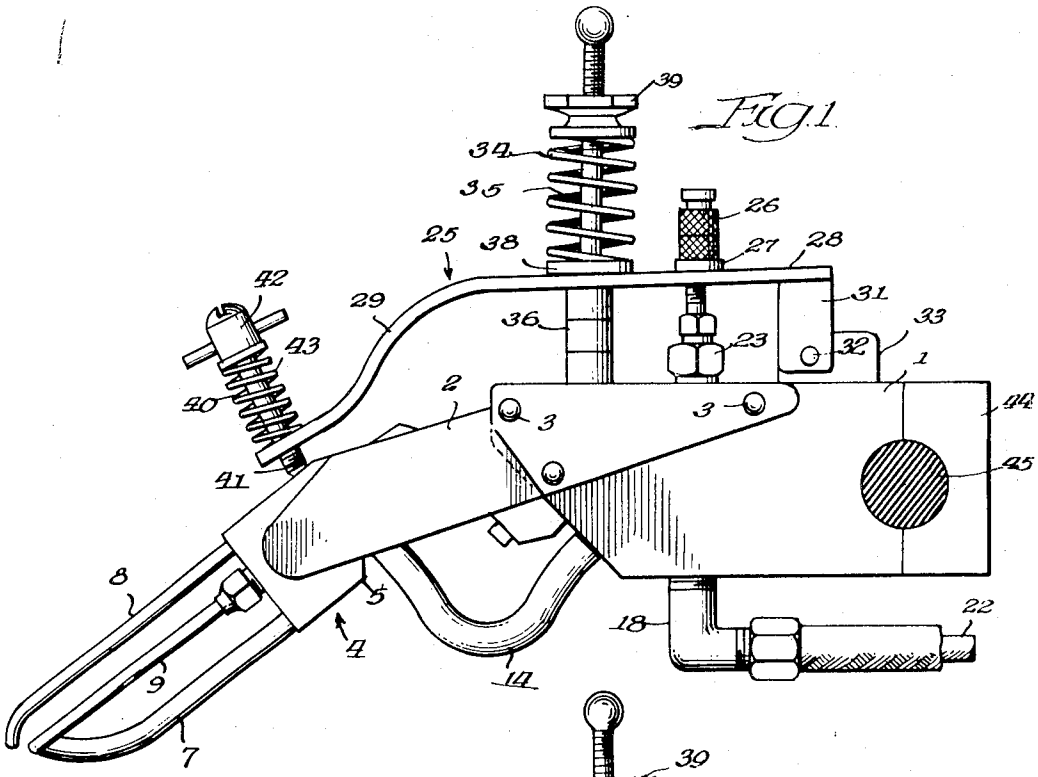


Fig. 1

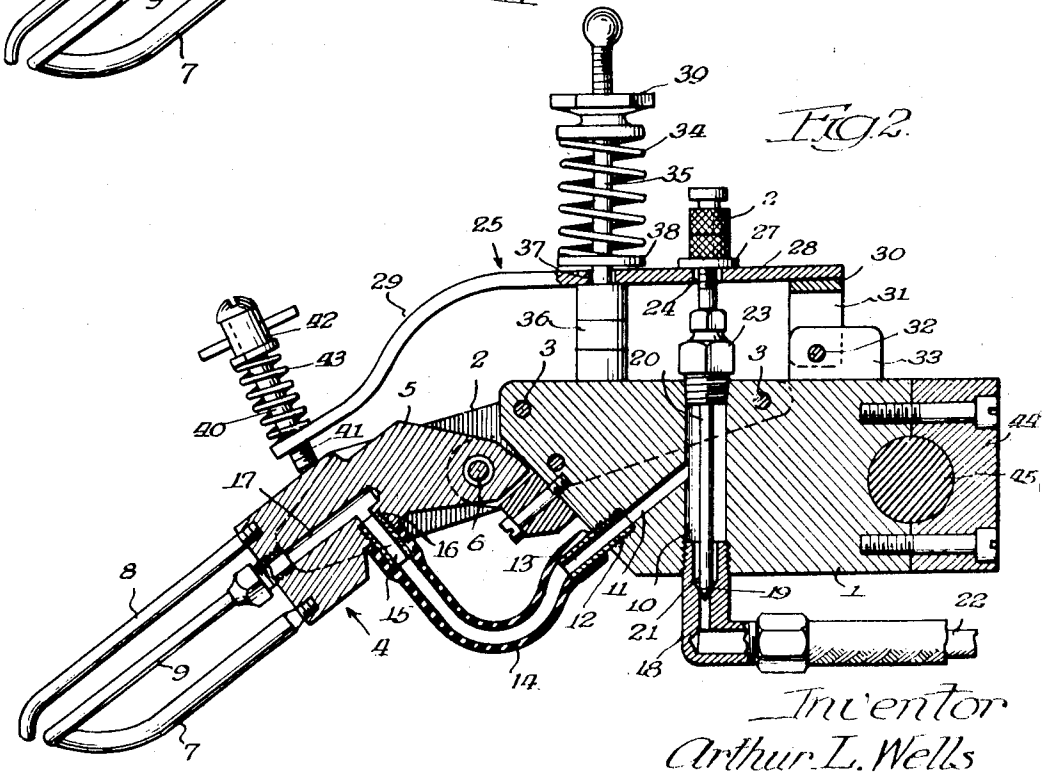


Fig. 2

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STRIPING DEVICE

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6 Claims. (Cl. 15—127)

This invention relates in general to striping devices particularly adapted for use in applying painted stripes to wall boards for the purpose of simulating tile.

In recent years it has become increasingly popular to manufacture wall board wherein squares are painted thereon and then applied to the walls of kitchens and bathrooms to make the walls appear like tile. Wall board, when used in this manner, is considerably less expensive than the actual tile; and for this reason, it has become quite popular. Still more recently, various other types of designs of wall board having stripes painted thereon have come into use wherein the stripes may be all vertical or all horizontal.

Providing this wall board with painted stripes has been an expensive consideration in the manufacture thereof; and it is, therefore, one of the principal objects of the present invention to provide an apparatus for applying painted stripes to wall board for the purposes above outlined.

Another object of the invention is to provide a new and improved form of paint dispensing device for applying the paint and striping wall board or other similar types of material.

Other objects of the invention will appear more fully upon a reading of the following description taken in conjunction with the accompanying drawings wherein:

Fig. 1 is an elevational view of a striping device embodying the features of the present invention; and

Fig. 2 is a vertical sectional view through the device illustrated in Fig. 1.

Briefly described, the invention embodies a novel type of striping device which is adapted to dispense paint onto wall board or the like as the board is moved under the device which itself remains stationary. In manufacturing wall board for the purpose of simulating tile, it is customary to provide grooves in one surface of the board, which grooves are painted one color to set off the simulated tile squares, and the squares themselves are painted a different color. The device of this invention is to apply the stripes for setting off the squares and to supply paint to the elongated grooves already present in the board. Each separate device is automatic in its operation so that it will start and stop the flow of the paint at the proper time.

Referring now more particularly to the drawings and more specifically to Figs. 1 and 2, the device per se comprises a main body portion 1 which has a pair of side members 2 extending forwardly from each side thereof. These side members are preferably formed of thin sheet metal and may be secured to the body 1 by means such as screws or rivets 3.

The paint dispensing portion of the device is positioned at the forward end thereof and is generally indicated by the number 4. The paint dispensing portion includes a body 5 positioned between the side members 2 and mounted for pivotal movement on a pin or rod 6 extending through the body 5 with a substantial clearance or loose fit as shown in the drawing. The body is thus permitted a limited pivotal movement in a substantially vertical plane and a slight lateral movement due to the loose fit of the pin 6.

The forward end of the body 5 is directed downwardly at an angle and is provided with an elongated guide rod 7. One end of this guide rod 7 is secured to the forward end of the body 5, and the other end is curved so as to fit snugly in a groove provided in the surface of a piece of wall board. A spreader arm 8 extends forwardly from the front end of the body 5 and has its forward end bent downwardly and rounded so that it will spread the paint evenly within the groove, the paint having previously been supplied thereto by means of the dispensing tube 9. The tube 9 is removably mounted at the forward end of the body 5 between the guide rod 7 and the spreader arm 8 thereby insuring that the device will be guided properly in the groove and that the paint supplied through the tube 9 will be spread evenly within the groove by the spreader arm 8.

The main body 1 has a substantially vertically disposed opening 10 therethrough. A smaller opening or passageway 11 communicates at one end with the opening 10 and is inclined downwardly and forwardly toward the forward end of the body 1. A tubular member 12 threadedly engages an enlarged portion of the passageway 11 at the forward end thereof so that the opening 13 therethrough communicates directly with the passageway 11. A flexible tube 14 is secured at one end thereof to the tube 12 and communicates with the passage 13 therein, and its other end is fastened to another tubular member 15 in the pivotally mounted body 5. The tube 15 has a passage therethrough communicating with a short passage 16 in the body 5 which in turn communicates with the longer passage 17 extending forwardly and downwardly through the body 5. The passage 17 communicates with the dispensing tube 9 so that paint within the opening 10 and under pressure will be forced through the passage 11, flexible tube 14, passage 17, and outwardly through the end of the dispensing tube 9.

A connecting member 18 threadedly engages the bottom of the opening 10 and has a valve seat 19 formed therein. A needle valve 20 is provided which has the bottom end thereof tapered to fit against the valve seat 19 to prevent the flow of paint therethrough. The paint may be supplied in any suitable manner through a tube 22 in communication with the connection 18 from a suitable source of supply not shown.

The needle valve 20 is normally in its lower position as shown in Fig. 2 bearing against the valve seat 19 so as to prevent the flow of paint therethrough.

The upper end of the opening or passage 10 is closed by means of the sealing gland 23, but the valve 20 extends through the gland 23 and upwardly through an opening 24 in an arm 25. That portion of the needle valve 20 above the gland 23 may be threaded to receive the adjusting nuts 26. A collar 27 is positioned between the adjusting nuts 26 and the upper surface of the arm 25 to form a bearing surface so that the amount of movement or the distance through which the valve 20 is permitted to move with respect to the valve seat 19 may be adjusted to suit different types of paints and to control the flow of paint by adjusting the nuts 26.

The arm 25 is formed so as to have a substantially flat and horizontally positioned rear portion 28 and a downwardly curved front portion 29. The rear end of arm 25 has a bracket 30 secured thereto having downwardly extending arms 31 at each end thereof adapted to receive a pivot pin 32 which is supported by a pivot block 33 mounted on the upper surface of the main body 1. At this point, it will be clear that the arm 25 will have a pivotal movement about the pin 32 in a vertical plane so that when the arm 25 is in a lowered position, the

valve 20 will be closed; but when the arm is elevated above its pivotal point, it will carry the collar 27 upwardly with it and the valve stem connected thereto so as to open the valve and permit the flow of paint.

The arm 25 is maintained in a normally lowered position by means of a coil compression spring 34 surrounding a vertically disposed rod 35. The lower end of the rod 35 is connected to a stop member 36 and passes through an opening 37 through the arm 25. A collar 38 surrounds the rod 35 and provides a bearing surface between the lower end of the spring 34 and the upper surface of arm 25. The upper end of the rod 35 is threaded to receive an adjusting nut 39 whereby the compression of spring 34 can be adjusted to determine the amount of pressure necessary to elevate the arm 25 and thereby open the valve 20.

The forward end of the arm 25 has another rod 40 secured thereto, the lower end of rod 40 being threaded as at 41 for engagement with a suitable opening through the forward end of arm 25. The upper end of rod 40 has an enlargement or head 42 thereon, and a coil compression spring 43 surrounds the rod bearing upwardly at one end against the head 42 and downwardly at its other end against the arm 25. The lower end of rod 40 is adjusted to bear against the upper surface of the body 5 whereby an upward pivotal movement of this body will cause a similar upward movement of the arm 25 to thereby open the valve and permit the flow of paint. The threaded engagement of the rod 40 with the arm 25 will permit a certain amount of adjustment to be made, and the spring 43 acts to maintain the rod 40 in any position to which it has been adjusted.

It is contemplated that a plurality of these devices may be mounted in spaced relation along the length of a supporting rod so that a grooved wall board may be moved under these batteries of paint dispensers to thereby paint a plurality of stripes simultaneously in one direction along the length or width of such wall board. The rear end of the main body 1 may have a semicircular recess therein so that a recessed cap 44 may be secured thereto in order to fasten or mount the device on a rod 45.

Some or all of these devices may be elevated and held out of contact with a board passing thereunder if so desired. They may also be easily adjusted to adequately take care of boards having different thicknesses. In any event, the grooved board is caused to move in a longitudinal path beneath a plurality of the dispensing devices all of which are so adjusted that when the board first starts its movement, the forward edge thereof will come against the guide members 7 of each device and force the dispensing portion of the device, including the body 5, in an upward direction. When this part of the device is thus moved upwardly, it will contact the lower end of rod 40 and carry it upwardly, which in turn will also elevate the arm 25 against the force of the spring 34. This upward movement of arm 25 will also carry with it the needle valve 20 thus lifting it off of its seat 19 to thereby permit the flow of paint through the various passages above described. The paint will thus be dispensed through the outer end of the dispensing tube 9 and will be deposited in the groove in the board. The lower curved end of the guide rod 7 will ride in the groove in the board, and the spreader arm 8 will also ride in the groove to spread the paint along the sides of the groove which has just been placed there by the dispensing tube 9. After the board has completed its passage through the apparatus and has been striped in one direction and after the rear end thereof has passed beyond the dispensing part of the device, there will be no further support for this part of the device; and it will, therefore, drop downwardly. When this occurs, the spring 34 will force the arm 25 downwardly also and permit the valve to be closed thereupon preventing any further flow of paint.

The preferred manner in which the previously described striping device may be used is described and claimed in my copending application, Serial No. 37,446 filed July 7, 1948, now matured into United States Letters Patent No. 2,548,456, of which the present application is a division.

The invention is hereby claimed as follows:

1. A striping device of the class described comprising relatively movable body members, each said body member having fluid passages therethrough, said body members being resiliently mounted one with respect to the other for both vertical and lateral movement means connecting the passages of one body member with the passages of the other body member, fluid dispensing means on one of the bodies, and valve means to control the flow of fluid through said passages.

2. A striping device of the class described comprising a main body member having fluid passages therethrough, a second body member also having fluid passages therethrough and mounted on said main body member for movement relative thereto, said body members being resiliently mounted one with respect to the other for both vertical and lateral movement, valve means operable to control the flow of fluid through said passages, means operable in response to movement of said second body member to actuate said valve means, and fluid dispensing means on one of said body members.

3. A striping device of the class described comprising a main body member having fluid passages therethrough, valve means operable to start and stop the flow of fluid, a fluid dispensing means resiliently and pivotally movable for vertical and lateral movement with respect to said main body member, and means operable in response to movement of said dispensing means to actuate said valve means.

4. A striping device of the class described comprising a main body member having fluid passages therethrough, valve means in said main body member operable to start and stop the flow of fluid, a second body member having fluid passages therethrough and resiliently and pivotally mounted on said main body member, flexible connecting means between the passages of each said body member to provide continuous fluid flow from one body member to the other, fluid dispensing means on said second body member and movable therewith, and means operable in response to movement of said second body member to actuate said valve means.

5. A striping device of the class described comprising a main body member having fluid passages therethrough, valve means in said main body member operable to start and stop the flow of fluid, said valve means including a valve stem extending outwardly through said main body member and beyond one side thereof, said valve stem being slidable to open and close the valve, fluid dispensing means in communication with the passages in said main body and resiliently movably mounted thereon, and means connected with said valve stem and movable with said dispensing means to actuate said valve means upon movement of said dispensing means.

6. A striping device of the class described comprising a main body member having fluid passages therethrough, valve means in said main body member operable to start and stop the flow of fluid, said valve means including a valve stem extending outwardly through said main body member and beyond one side thereof, said valve stem being slidable to open and close the valve, fluid dispensing means movably mounted on said main body, an arm resiliently and pivotally mounted on said main body and connected to said valve stem, whereby movement of said arm will actuate said valve, and means at one end of said arm in contact with said dispensing means to render said arm and dispensing means movable together, whereby movement of said dispensing means will move said arm and actuate said valve.

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