Nov. 7, 1939. G. J. SHAFFER 2,178,899

TROWEL

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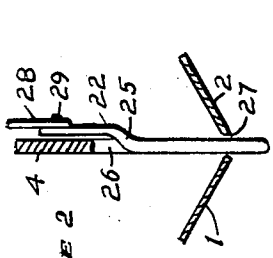



FIGURE 2

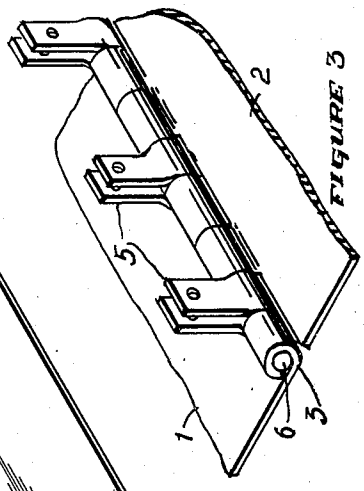



FIGURE 3




FIGURE 1

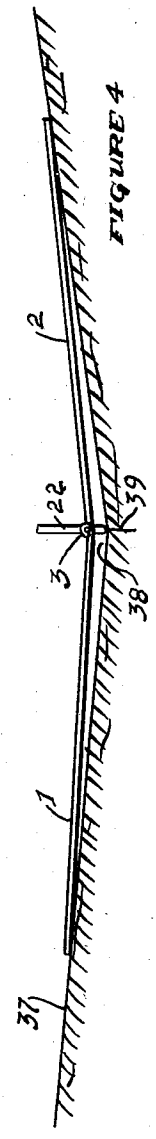



FIGURE 4

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## TROWEL

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5 Claims. (Cl. 72—136)

The present invention relates particularly to that type of trowels used in the application of plastic compounds to wall surfaces, and more particularly to a form of trowel for use in the application of a plastic compound to the joints of a specific form of wall structure known as "sheetrock".

In preparing such a wall for papering, or for any other desired type of wall finish, it is of course necessary that the wall surface be left perfectly smooth, and the joints solid and substantial. To accomplish the desired results it has heretofore been customary for the workman to use a single blade trowel, and by the exercise of the greatest care and skill apply a cementitious compound of measurable thickness over a joint, tapering it laterally on both sides until it merges with the general surface of the wall. In performing the work in this manner, particularly over a joint between two angularly disposed wall surfaces, it is extremely difficult to guide the trowel accurately along the joint, and it is particularly difficult to work the edges of the compound down to a point where they will merge smoothly with the underlying wall. The result is that when a joint is covered in this manner a more or less irregular, or wavy, corner is produced and when the composition is dry and hard the edges must be sandpapered down smooth with the wall. This sandpapering process is the most objectionable feature because it results in the formation of a very fine dust which is both obnoxious and injurious to the workman, creating conditions which make the contractor loath to undertake such work.

It is the principal object of the present invention, therefore, to provide a trowel so constructed and arranged that a compound can be smoothly and evenly applied in any desired thickness to a joint by a workman who is not particularly skilled in the art.

It is another object of the invention to provide a trowel of the character indicated that will automatically hold true to the line of the joint, and that will apply the compound in such a manner as to obviate the necessity of extensive sandpapering of the edges.

Finally, it is an object of the invention to provide a tool of the character indicated that may be readily adjusted for use on a flat wall or on any degree of angle therein, and one that will be economical to manufacture, simple in form and construction, strong and durable, and highly efficient in its practical application.

In the drawing:

Figure 1 is a perspective view of a trowel embodying my invention, a part being broken away.

Figure 2 is a detail section on line 2—2 of Figure 1.

Figure 3 is a perspective view of a portion of the device showing a method of forming the hinged joint between the two blades.

Figure 4 is an illustration showing the method of application of the trowel to an angular surface.

In the particular embodiment of the invention herein disclosed I show at 1 and 2 two identical trowel blades hinged together along their adjacent longer edges as indicated at 3.

At 4 is shown a supporting plate for the blades, and the blades are swingably mounted on the plate by means of straps 5 which encircle the hinge pin 6.

The plate 4 is provided with an upstanding portion 7 at its forward end, and the upper end of this portion 7 is provided with a rearward extension 8 upon which is mounted a handle 9. The handle 9 is disposed to lie in parallel relation to the hinge 3.

In order to effect any desired angular relationship between the two blades 1 and 2 I provide the following mechanism. I provide a bearing member 10 on the top edge of portion 7 and form a slot 11 in said portion extending from member 10 down to a point adjacent the hinge 3 and at right angles thereto. At the lower end of the slot I mount a bearing member 12.

In the bearing members 10 and 12, and extending the full length of slot 11, is a screw 13 journaled in said bearing members as shown. The screw 13 may be rotated in either direction by means of a wing-nut 14.

At 15 is shown a follower block threaded onto the screw 13 and engaging the part 7 to prevent its rotation with the screw. At 16 and 17 are two links pivotally connected to the follower 15 at 18 and 19 respectively, and to the blades 1 and 2 at 20 and 21 respectively.

Since the links 16 and 17 are angularly disposed between the follower 15 and the two blades 1 and 2 it follows that when the screw 13 is rotated and the block 15 caused to move longitudinally thereon the two blades will be simultaneously and equally adjusted about the hinge 3. They may be adjusted to lie in the same plane, or in angular relation to each other on either side of said plane.

A guide member is mounted on the trowel, and this member comprises a plate 22 provided with an arm 23 which is pivotally mounted on plate 4 as at 24. The arm 23 parallels the side of

plate 4, and the plate 22 is offset at 25 to enter an opening 26 formed in plate 4. By this means the portion 25 of plate 22 is brought to lie in the plane of plate 4 and is movable through a slot 27 formed in the hinge 3.

To adjustably position the guide member I provide a link 28 pivotally connected thereto as at 29 at one end, the other end being pivotally connected to a follwer block 30 as at 31. The follower block 30 is threaded on to a screw 32 which is in turn journaled in the plate portion 7 as at 33 and lies in the plane of said portion 7, being positioned in a slot 34 in said portion 7. This block 30 engages the plate as at 35 to prevent rotation therein, and the screw is actuated by means of a wing-nut 36.

While the uses and applications of the trowel are varied, one specific application thereof is illustrated in Figure 4. Here the wall is indicated at 37, and since it is desired to have the composition applied with a thickness indicated at 38 over the joint 39 the screw 32 is operated to advance the guide member 22 as shown and the screw 13 is actuated to set the blades 1 and 2 in the positions shown. The guide member now supports the center of the trowel, prevents springing of the blades, and enables the operator to accurately follow the joint.

The composition applied in the manner described is uniformly thick throughout the whole length over the joint and tapers laterally to a feather edge that merges smoothly with the wall and requires no sandpapering.

Although a certain specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction and mode of assembly may be made without departing from the scope of the invention as indicated in the appended claims.

I claim:

1. A trowel comprising, a supporting plate provided with a handle, a pair of trowel blades hingedly mounted on one edge of the plate along adjacent parallel edges, a screw rotatably mounted on the plate and in the plane thereof, a follower block threaded on to the screw and engaging the plate, and links connecting the block and blades whereby rotation of the screw will effect equal adjustment of the blades.

2. A trowel comprising, a supporting plate provided with a handle, a pair of trowel blades hingedly mounted on one edge of the plate along adjacent parallel edges, and means for adjustably positioning the blades about the hinge, said hinge having a slot formed therein, a guide member adjustably mounted upon the plate and passing through said slot, and adjusting means for the guide member.

3. A trowel comprising, a supporting plate provided with a handle, a pair of trowel blades hingedly mounted on one edge of the plate along adjacent parallel edges, and means for adjustably positioning the blades about the hinge, said hinge having a slot formed therein, and said plate having an opening formed therein communicating with the slot, a guide member disposed in the opening and projecting through the slot, and adjustable supporting means for the guide member.

4. A trowel comprising, a supporting plate provided with a handle, a pair of trowel blades hingedly mounted on one edge of the plate along adjacent parallel edges, and means for adjusting the blades about the hinge, said hinge having a slot formed therein, and said plate having an opening formed therein communicating with the slot, a guide member having a part disposed to lie in the plane of the supporting plate and in said opening and slidably engaging said slot and a part offset to overlie the side of the plate, and adjustable supporting means for said guide member.

5. A trowel comprising, a supporting plate provided with a handle, a pair of trowel blades hingedly mounted on one edge of the plate along parallel edges, and instrumentalities adjustably associated with the plate and connected to the blades to adjustably position the blades about the hinge.

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