METHOD OF APPLYING PAINT

Charles C. Morrison, Easton, Pa., assignor to
Binney and Smith Co., New York, N. Y., a cor-
poration of New Jersey

Application April 10, 1935, Serial No. 15,552

4 Claims. (Cl. 41—26)

The present invention relates to an improve-
ment in a method of applying paint in the
painting of pictures with plastic colors, such as
are used by artists. Such plastic colors or pigm-
ments may be in the usual form, in collapsible
tubes, known as oil colors, where the pigments are
mixed with linseed oil to the desired viscosity or
consistency, or such pigments may be mixed with
any other suitable semi-liquid or plastic base,
such as will ultimately dry and set the colors.

Further improvements lie in the method of
spreading and blending the colors upon the sur-
face of the picture plane, together with means
for a stippling of the colors thereon thus creating
a texture of the painted-on film of paint, not
heretofore effected, thereby permitting of rough
or smooth applications of plain color to portions
of the picture, or permitting of rough or smooth,
gradual blendings of two or more colors. Further,
the herein method of applying color permits of
color picturization in bold strokes, or with any
desired sharpness of detail, and also a velvety
distribution of the colors, and also broken and
random high light and shadow color blocking and
mixing, such as is used to depict distant or near
masses of foliage, as in landscape paintings.

A further improvement is in the structure of
the means used to apply the color to the can-
vase or other paint receiving surface, as a substi-
tute for the customary hair filled brushes. As will
be hereinafter noted, the means for applying the
color comprise one or a plurality of, preferably,
moulded soft rubber applicators each having a
variety of forms and surfaces, as will hereinafter
appear in detail, each such applicator being
adapted to aid in attaining, by reason of its indi-
vidual surface characteristics, some desired tech-
nical delineating, or color nuance, or effect, not
normally or easily attainable by ordinary meth-
ods of color picturization.

The improvements further consist in the meth-
ods of applying and blending colors. This meth-
od is not possible by means herebefore employed
in painting; and the invention, therefore fur-
ther consists in applying the color or in bringing
about new functions in the above method by
means of a rubber brush of the kind described.
Thus by means of an applicator having a soft
electric rubber spatulate brush member thickened
at the inner end and having a wide applying face,
it is possible to apply a small quantity of the
color, paint or other material to a surface, draw-
ing the color material along the surface by means
of said face, while pressing the face against the
material and surface, causing said flat face to
press upon the material with a pressure extend-
ing continuously across the path of movement
of the brush, the pressure of adjacent parts of
the rubber member being substantially independ-
ently elastic and sufficiently firm to press the ma-
terial to a film or to a thicker layer of desired
thickness depending upon the pressure, the fric-
tion of the rubber, exerting a firm drag against
movement of the brush along said surface.

This method and applicator are particularly
suitable for applying different colors to a surface
and mixing and blending them by drawing them
together on the surface and along the surface,
while exerting upon the mixture a firm yielding
pressure on substantially all parts of an area
extending continuously across the path of the
brush member, said pressure being sufficiently
firm and uniform to squeeze and blend the colors
together and to form a transparent film or layer
of desired thickness, depending upon the pressure
or repeated strokes on the same part of surface.

The foregoing, and other features of advantage
will appear as the herein description proceeds,
and it is obvious that modifications may be made,
in the methods herein outlined, or in the appli-
cator structure herein disclosed, without depart-
ing from the spirit hereof or the scope of the
appendant claims.

In the drawings,
Fig. 1 is a view of an applicator in elevation,
with the handle portion broken away;
Fig. 2 is a side elevation of the applicator of
Fig. 1;
Fig. 3 is an enlarged sectional view, taken on
line 3—3, Fig. 1, looking in the direction of the
arrows;
Fig. 4 is a view, similar to Fig. 1, but showing
a modified form of surface on the spatulate mem-
er of the applicator;
Fig. 5 is a side elevation of the device of Fig. 4;
Fig. 6 is a side elevation similar to Fig. 5, but
with only one surface thereof modified, another
surface being flat;
Fig. 7 is an enlarged, fragmentary surface view
of a pattern applied or executed by the modified
face of the applicator of Fig. 4, 5 or 6, the pat-
tern being applied by a straight, longitudinal
stroke of the applicator;
Fig. 8 is a transverse section enlarged of the
spatulate member of Fig. 4, taken on the line
8—8, looking in the direction of the arrows;
Fig. 9 is a front elevation of another modified
form of applicator having its opposite surfaces
modified by a brambbling, for stippling purposes;
Fig. 10 is a side view of Fig. 9, showing both side faces of Fig. 9 as brambled; Fig. 11 is a single faced stippler, brambled on one face only, in the direction of the arrows; Fig. 12 is an enlarged fragmentary view of the type of marking made by the application of the devices of Figs. 9, 10 and 11; Fig. 13 is an enlarged transverse sectional view taken on line 13—13, Fig. 9, looking in the direction of the arrows; Fig. 14 is a rear elevation of a further modified form of applicator; Fig. 15 is a side or edge elevation thereof; Fig. 16 is a sectional view illustrating one use of the applicator of Figs. 14 and 16, the section being taken on line 15—15, Fig. 14, looking in the direction of the arrows, and through the surface covered and the paint applied; Figs. 17 and 18 are fragmentary front and side elevations, respectively of a further modified form of applicator having an approximately straight and edge; Figs. 19 and 20 are front and side elevations of a round ended applicator; Figs. 21 and 22 are front and side elevation of an applicator having a multiple ended tip; Fig. 23 is a side elevation of an applicator similar to that shown in Fig. 21, with V-shaped end portion forming spaced end edges; Figs. 24 and 25 are front and side elevations, respectively, of a further modification in an applicator; Fig. 26 is a perspective view of the applicator of Fig. 25, showing the opening in the ferrule end of the device to receive the tip end of the brush handle for manipulation; Fig. 27 is a fragmental perspective view showing the tip end of the handle for fitting the ferrule of the applicator of Figs. 13 to 31; Fig. 28 illustrates one form of locking means for locking an applicator to a handle; Fig. 29 is a sectional view taken on the line 29—29, of Fig. 28, looking in the direction of the arrows; Fig. 30 is a fragmentary side view of the applicator of Fig. 23, illustrating the action of the tip thereof in use; Fig. 31 is a sectional view taken on the line 31—31, Fig. 17, looking in the direction of the arrows, illustrating the use of two forms of rubber, of unlike degrees of hardness or temper; and Fig. 32 is a diagrammatic view illustrating an applied paint film. In all figures illustrating applicators, like numerals indicate like parts throughout.

The applicator of Figs. 1, 2, and 3, as shown comprises a moulded rubber body or member generally denoted by A, being of spatulate form, as at 5, 6, 7, having smooth opposite faces 6—6 and having an integral socketed brush handle engaging ferrule 2 which is of cylindrical cross section and has a bore 3, shown dotted therein, having an interior ribbed annulus 4, which engages in an annular groove located in the applicator-engaging end of the wooden handle 1. The wooden handle 1 is of an extensive length, but is broken away, as in Fig. 1, for convenience in showing.

The spatulate member A, as shown in the enlarget section in Fig. 3, has a broad parallel surfae 6—6 having rounding margins thereon, which may meet in a medial, peripheral edge 7 all around the spatulate portion 5, and which edge may merge into the lower end of the ferrule portion 2. This edge portion may, if preferred, be half-round, without the medial edge 7. It will further be noted that, while the opposite edges 7—7 of the spatulate member are slightly divergent, from the lower edge 7 towards the ferrule end 2, the other sides thereof are rounded. Thus, the tendency of the spatulation member when used to spread and blend paint upon a surface is (due to the rounding peripheral edge) to smooth the paint down without any paint scraping action; and where two or more colors are used for obtaining desired tints, the colors may be worked or blended together by successive strokes of the spatulate member upon the picture plane, until the desired tint is obtained. Then the colors may be spread to an ever widening area upon the picture plane until the desired area is covered and the desired effects are accomplished. The applicator may be used exactly as a flat brush would be used, by stroking the alternate faces 6—6 upon the paint on the surface of the picture plane, or canvas, thus to blend and distribute the color over the desired area. It has been found that the peculiar texture of the surface of the soft rubber spatulate 5, and its flexibility adapt it for perfect application of paint, due to the frictional qualities of the rubber and the tendency of the semi-liquid or plastic paint to be evenly distributed, or intermixed when blending, under the soft, gentle squeezing pressure exerted upon the paint by the spatulate member. The action of the applicator, during the painting operation is not that of a squeegee, but is similar to a kneading and spreading action, the paint being gradually kneaded out in all directions upon the canvas into film-like proportions, into any degree of tenuosity and transparency. This may, which may be of an opaque nature may be spread as a film until it becomes substantially semi-transparent in some areas of distribution and opaque in other areas, this action being entirely due to the structural features and functions of the applicator of Figs. 1 and 2.

In applying or stroking paint with the above noted applicator, the alternating stroking is always done in a direction away from its lower edge margin 1, Fig. 1, in a direction opposite to the arrows 2—3, and to prevent scraping off of paint, the opposite side edges 7—7, Fig. 1, as previously pointed out are rounding, and divergent in the direction of the painting stroke and thus tend to flatten down and smoothly distribute and spread the paint.

In addition to the above new functions and advantages, my new applicators have the further advantage that they may be very quickly and easily cleaned merely by wiping them off. A single applicator may be instantly cleaned of one color and immediately used for another color, thus allowing the use of one of the new applicators in the place of a number of hair brushes heretofore used. This, together with the fact that the applicator can be much more economically manufactured than the hair brush, effects a very great saving in the cost of the artist.

Because of the action of the pressure forces of the soft uniformly high elastic rubber spatulate member thickened at the inner or handle end, the action is different from previous applicators; and rounded edges and continuous smooth wide flat face portions. The flat face may be used to apply a small quantity of the paint or color material to the surface and then drawing the material along the surface by means of said face, while pressing the face against the material, causing said flat face to press upon the material with a firm yielding pressure simultane
ously to all parts of an area engrossed by said face, said face moving along and extending across and along the path of the brush, the pressure of said face extending continuously and substantially uniform substantially continuously across a major intra-material portion of said path so as to gain a firm grip or bite on the canvas or other surface, the pressure gradually decreasing near the rounded margins toward the edges, to spread the material to the sides of the path, the pressure markedly decreasing at said rounded edges.

The pressure of the face 6 is sufficiently firm and uniform to squeeze the material to any thickness from a smooth thick layer to a transparent film, depending upon the pressure applied to the member or the number of strokes used. The pressure is sufficient to blend the material or color with said surface or a previously laid material, or to blend a mixture of colors; and said face 6 has sufficient friction to exert a firm drag against movement of the member along the path of the stroke.

Different colors may be mixed and blended by drawing them together on the surface and along the surface, while exerting upon the mixture the firm yielding pressure of the face 6 on substantially all parts of an area extending continuously across the path of the pressure, said pressure being sufficiently firm and uniform to squeeze and blend the colors together and to form a transparent film or layer of desired thickness, depending upon the pressure and number of strokes.

As it is desirable in many instances to treat different portions or areas of a scene or picture with a somewhat different technique, and to accomplish different effects, the spatulate member may be modified as in Figs. 4, 5, 6, 9, 10, 11, 14, and 15, by slightly altering the contours and painting surfaces thereof. For instance, the spatulate member 8 of the applicator B, Fig. 4, may, as shown in Fig. 8, have both opposite bases provided with moulded on ribs such as 9—9, whereby the spatulate member when used to apply paint to a surface, such as P, Fig. 7, will lay a series of parallel lines 9'. When this applicator B is stroked successively at right angles, and out of the parallelism indicated in Fig. 7, it will create a cross-hatching effect in the laid media.

Fig. 6 is similar to Figs. 4 and 5, except that the spatulate member 8' of applicator C is at a slight angle as viewed side-wise and has only one face provided with spaced ribs 5', the other face 9' being smooth for use somewhat as the face 6 of Figs. 1 to 3.

Figs. 9, 10, and 11, show another different type applicator, the applicator D having both faces, as at Fig. 10, provided with a plurality of spaced, hemispherical brambles 11, on its opposed painting faces 10, these brambles being shown at 11—11, Fig. 13 in sectioned enlargement.

Fig. 11 discloses, in side elevation, a modified applicator, which is somewhat similar to that shown in Fig. 6, except that the brambles 11, on the applicator E, Fig. 11, are substituted on the face, while the protuberances 9, as in Fig. 6. The other inclined face 10'', is smooth somewhat as the face 6 of Fig. 1.

The use of the brambles of the last described applicator is to apply and spread paint by stippling the same about as indicated at 11', in Fig. 12, on surface P, wherein the paint 11' may be blended, and spread or distributed as desired, over the picture area, giving a different texture to the picture. This applicator may also be used, brush-like in the form shown in Figs. 9 and 10.

In Figs. 14 and 15, there is shown a rubber applicator F which may be used somewhat similar to a palette knife, to travel on color by its single inclined, flat face 14 on the spatulate member 12. Its tapering end may also be used for blocking in, blending and distributing color on smaller areas when greater detail is required. It may be also used, due to its cross-sectional contour, as in Fig. 16, to scrape off applied paint G from picture or palette surface P by moving the applicator F with its surface 14 flat on the surface P, in the direction of the adjacent arrow, thus to pick up the soft paint, as at G'. Thus this latter applicator F has features and functions which add to the effectiveness of the method herein involved.

In the Figs. 18 to 31, are illustrated further modifications of spatulate applicators, of various shapes and forms, embodying the same functions as those described for Figs. 1 to 15, plus additional functions, as will appear hereinafter.

In Figs. 17 and 18 are shown a fragmented handle I, having, as in Fig. 27, a reduced or stepped tip, or extension 3', having a shoulder 3'' against which the top of the ferrule 2 of the spatulate member 1 rests, thereby to act, with the bottom edge of tip 3' and the bottom of bore 3 of the ferrule, as a stop to prevent upward movement or creep of the spatulate I upon the handle. This feature is important because it permits of proper pressure of the spatulate member during the color laying and blending operations. It also permits the provision of a plurality of spatulate members of different forms to be furnished with one handle whereby spatulate members may be readily substituted, one for the other, as desired.

The handle tip 3' in this modification, as in Fig. 27, is rectangular, to prevent rotation of the spatulate during use, while allowing easy removal and replacement of spatulate members, as desired.

The spatulate members of Figs. 18 to 31 may be composed of two different kinds of rubber, as illustrated in Fig. 31, which is a transverse section of Fig. 17, this difference being indicated by the cross-hatching and appurtenant word "hard" directed to the bored ferrule portion 2, which receives the handle tip, and the word "soft" directed to the spatulate flexible end 15. Thus while the rubber of the ferrule may be of tough, semiflexible rubber, the tip 15 may be of medium or extremely soft, pliable rubber, having a maximum of tractive surface effect, the hard and soft portions, as at the zone X, Fig. 31, being gradually merged, or intermixed with one another so that in effect, the spatulate member gradually ranges from a thin, pliant tractive tip 15 to a tough handle engaging ferrule 2, with gradual changes of temper, the extremes of which are adapted at one end to pliability, and suitable tractive friction, engage with and blend the paint, while at the other end it is stiff enough to press the softer portion firmly upon the surface being covered, when desired, and to form an efficient ferrule on the brush handle I.

The spatulate member of Figs. 17 and 18, is as shown in Fig. 26, rectangular in its ferrule portion 2, and gradually merges downwardly into a converging, angular and flexible tip end 16.

The front elevation of Fig. 17 shows the sides of the end 15 flared outwardly, by curved lines 75.
While the applicator tip 16 is approximately straight but slightly downwardly curved. This contour of the blending and paint-applying member 25, 26, 27, 28, 29, 30, 31, 32, and 33 is slightly larger than the ferrule 2 and thus to become less pliable towards the ferrule end 2. Because of the curve at 17 the sharp corners at 18, 19, 20 are less of the face so as to form a distinct edge 16. This construction, with the curved tip edge 16, allows, if desired, the film of paint, Fig. 32, when applied to the surface plane 15, to be depressed, as a mass, at its center 42, and thickest at the edge so as to form a distinct edge P. However by continued stroking of the paint, it may be distributed with any desired degree of evenness or unevenness, over any maximum imum or minimum picture surface area, from a thick opaque covering, to an attenuated, practically transparent film. This latter feature is one of the important accomplishments of the present structure and method, and gives an artist additional means for added technique in picture painting. This latter feature is a function of all of the modifications shown herein. Figs. 19 and 20 illustrate a plastic member which in its side elevation of Fig. 20 is similar to the showing in Fig. 18, but in its front aspect, as in Fig. 19, the applicator tip end H, has its opposed angular faces 21, at the lower end 19 merged into an oval outline as at 20. The side 19—19 may be flared in the transverse direction, as are the sides 17—17, Figs. 17, 18, 19, and 26. The structure of Fig. 19 is useful in blending and scumbling of color and for giving a different texture to applied paint than would result from the use of the spatulate member of Fig. 18.

In Figs. 21, 22 and 23 there is shown an applicator of somewhat similar structure to that of Fig. 17, which is convergent from the ferrule 2, Fig. 22, to its tip end 23, and is divergent from the ferrule 2 to its tip end 23 in its frontal aspect, as in Fig. 21.

The devices of Figs. 22 and 23 are both alike in every respect except at the tip ends 23 and 28 respectively, wherein one end, Fig. 22 is shown slitted, thereby splitting the said end into three parallel tongues 26—26—26, while the form of Fig. 23 has its end provided with a V-slot 28, which splits said end into two angular diverging tongues 28—28, the action of which is illustrated in Fig. 30, in which the applicator is shown as being flexed in a paint applying stroke. The purpose of these longitudinally split applicator ends is to provide greater paint-carrying power and greater flexibility at the ends to distribute color with a brush-like action. The distinction of these split-end applicators is that they may be used in a substantially near vertical position, during the painting operation, whereas some of the above referred to may not be so used during paint distribution until they so bend that substantially all or a major portion of the broad contacting applicator face is parallel with the plane of the surface being painted. The tips of the applicator of Fig. 23 may carry paint V-slots 29, while those of both Figs. 22 and 23 are delicate enough to apply and spread paint, when required, somewhat like a brush. The sides 25—25 and 27 of the applicators of Figs. 22 and 23 may also be flat, like the sides 11—17 of Fig. 26.

Figs. 24 and 25 likewise show front and side elevations, respectively of another application having its paint applying spatulate member 39 having downwardly tapering edges 33—33, Figs. 28, converging from the ferrule end 2 to the tip end 31 to form the wide downwardly tapering flat sides 33 merging from the wide side of the ferrule 2 down to the narrow tip edge 31. This latter applicator is for laying, blending and distributing paint with strokes narrower than the strokes of the applicators of Figs. 17, 18, 21, 22, 10, and 26.

In order to increase the friction and drag of the spatulate member in use, the rubber of any of the herein spatulate members, particularly those of Figs. 1, 14 and 17 to 30 may, if desired, have incorporated therein a friction-giving material such as pulverulent zinc oxide, lithopone, clistine chalk whiting or the like or a mixture of two or more of these. However, the soft rubber alone produces a friction which is in all cases efficient, and in some cases it is preferable to omit the pulverulent material.

I claim as my invention:

1. A method of producing artists' pictures from plastic paint or similar material, said method including producing artists' picture elements by moving a small non-running mass of the plastic paint along a path on a picture receiving surface with brush like strokes, while exerting upon the upper face of the mass a firm yielding pressure throughout a continuous area of said face and across the path of the mass while maintaining the mass at said area entirely beneath the face; said pressure at closely adjacent points being substantially independently firmly elastic and substantially continuous across said path, the pressure at an intra-marginal portion of the path being sufficiently firm to squeeze the material to form a thin layer of desired thickness, the pressure nearer both margins of said path being much less, and forming layers of the paint much thicker than at said thin layer.

2. A method of producing artists' pictures from plastic paint or similar material, said method including producing artists' picture elements by drawing a small non-running mass of the plastic paint along a path on a picture receiving surface with brush like strokes, while exerting upon the upper face of the mass a firm yielding pressure throughout a continuous smooth area of said face and across the path of the mass while maintaining the mass at said smooth area entirely beneath the face; said pressure at closely adjacent points being substantially independently firmly elastic and substantially continuous across said path, the pressure along the mid-line portion of said path being sufficiently firm to squeeze the material to form a thin layer of desired thickness, the pressure gradually decreasing toward both margins of said path, and forming layers of paint gradually increasing toward said margins and being several times thicker at said margins than at said mid-line portion of said path, the pressure being just sufficiently firm to exert a substantially predetermined firm-yieldable elastic frictional drag against movement of said face along said surface to facilitate accurate technique.

3. A method of producing artists' pictures from plastic paint or similar material, said method including producing artists' picture elements by drawing a small non-running mass of the plastic paint along a path on a picture receiving surface with brush like strokes, while exerting upon the upper face of the mass a firm yielding pressure throughout a continuous area of said face and
across the path of the mass while maintaining the mass at said smooth area entirely beneath the face; said pressure at closely adjacent points being substantially independently firmly elastic and substantially continuous across said path, the pressure being longitudinally extended along spaced parallel intra-marginal longitudinal line portions of the path being sufficiently firm to squeeze the material to form a thin layer of desired thickness at said line portions, the pressure between said line portions being also longitudinally extended, and forming parallel longitudinal ridges of paint thicker than at said line portions.

4. A method of producing artists' pictures from plastic paint or similar material, said method including producing artists' picture elements by moving a small non-running mass of the plastic paint along a path over a picture receiving surface while exerting at times upon the upper face of the mass a firm yielding pressure throughout a continuous area of said face and across the path of the mass while maintaining the mass at said area entirely beneath the face; said pressure at closely adjacent points being substantially independently firmly elastic and substantially continuous across said path, said pressure at small limited round spaced intra-marginal portions of the path being sufficiently firm to squeeze the material to form at limited areas thin layers of desired thickness, the pressure around said portions forming surrounding layers of the paint thicker than at said limited areas.

CHARLES C. MORRISON.