April 24, 1962 F. A. PEYRON 3,030,647

APPARATUS FOR THE APPLICATION AND REMOVAL OF MAKE-UP

Filed Aug. 4, 1958 2 Sheets-Sheet 1

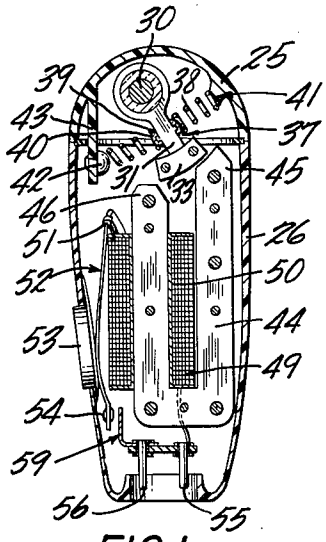

FIG. 1

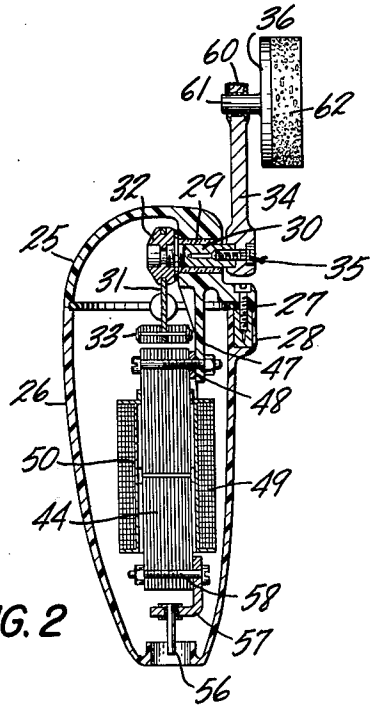

FIG. 2

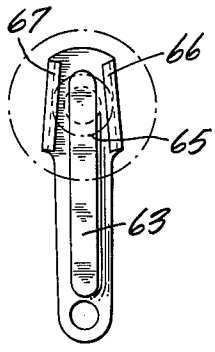

FIG. 3

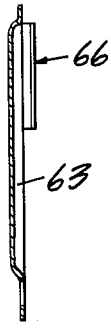

FIG. 4

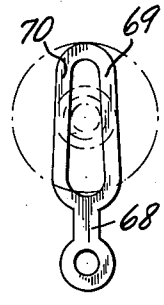

FIG. 6

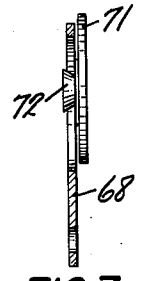

FIG. 7

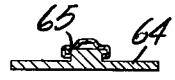

FIG. 5

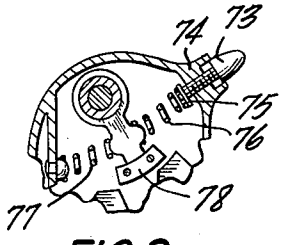

FIG. 8

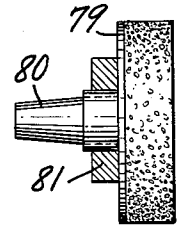

FIG. 9

April 24, 1962 F. A. PEYRON 3,030,647

APPARATUS FOR THE APPLICATION AND REMOVAL OF MAKE-UP

Filed Aug. 4, 1958 2 Sheets-Sheet 2

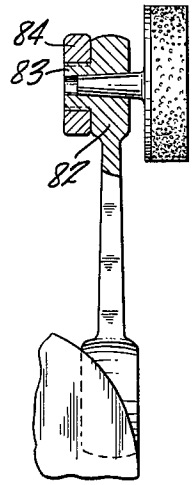

FIG.10

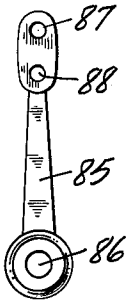

FIG.11

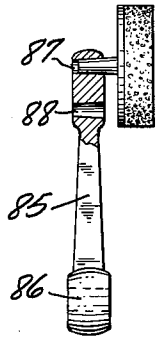

FIG.12

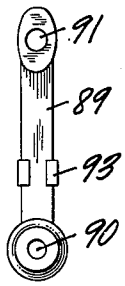

FIG.13

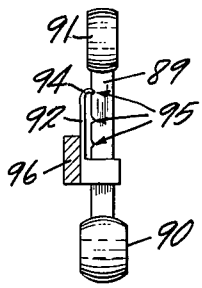

FIG.14

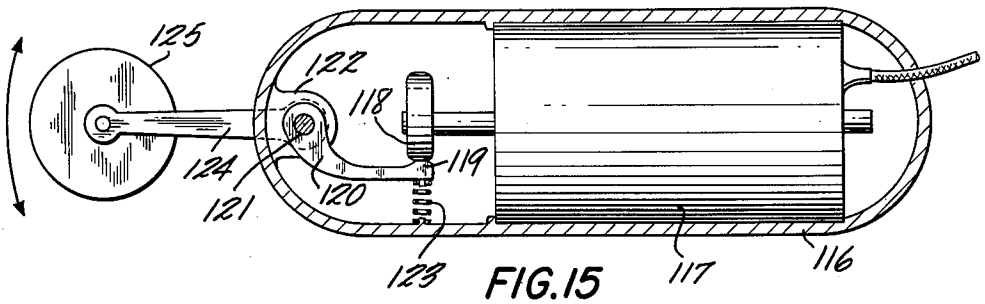

FIG.15

United States Patent Office 3,030,647
Patented Apr. 24, 1962

3,030,647

APPARATUS FOR THE APPLICATION AND REMOVAL OF MAKE-UP

Francois A. Peyron, 4 Rue de Londres, Paris, France

Filed Aug. 4, 1958, Ser. No. 752,871
Claims priority, application France Aug. 13, 1957
13 Claims. (Cl. 15—97)

The present invention relates to apparatus for the application and removal of make-up and more particularly to apparatus for the application and removal of make-up in which reciprocatory movements are employed. The term "make-up" is used broadly to include make-up remover.

Make-up application consists of preparing the face to receive coloring materials such as base tints or grease rouges, applying said coloring materials, and fixing them together with powder. Make-up removal consists of thoroughly intermixing a make-up remover (milk, lotion, etc.) with the make-up remaining on the face, producing a mixture which can be easily wiped off. The present invention applies only to these operations and is not concerned with either the initial deposit of the required quantity of make-up on the face, or with the wiping away of the mixture obtained by intermingling the remover with the make-up residue, both of which procedures can easily be done by hand.

An essential element of make-up is the application of make-up products to achieve a finish which will be as even and lasting as possible. However, the application of make-up products by hand inevitably produces defects which adversely affect the appearance and lasting quality of the make-up.

When make-up products are applied by hand it is impossible to prevent the formation of thicker layers at certain uneven points on the surface of the skin, e.g. folds, wrinkles, points of sudden change of curvature, enlarged pores, etc. Moreover, prolonged efforts to achieve perfection by manual application will accentuate rather than decrease the accumulation of grains of color material and powder in the irregularities of the skin. Upon continued rubbing in an effort to disperse the thicker layers, the pressure of the hand causes the grains to be rubbed into the small folds, pores, etc., thereby emphasizing these skin defects.

For example, powder is a mixture of grains of different sizes (0.2 micron for kaolin and up to 80 microns for talc) which, in good powders, are crushed to give a maximum grain size of about 10 microns. As a pore opening may sometimes be as large as 100 microns, the powder grains enter and clog the pore and no amount of rubbing by hand can remove these grains from the pore during the make-up application. Hence the make-up may emphasize rather than conceal the pores.

The lasting quality of a make-up application is achieved by means of several layers of powder on the face. Beauty institutes frequently use up to eight layers of powder for an evening make-up. However, when the powder is applied by hand, the powder agglomerates in small heaps of several grains and each of these small heaps is held by the adhesive quality of the previously applied materials and the sebum of the skin and by surface tension. When perspiration begins to mix with the previously applied materials and the sebum, the make-up will appear shiny wherever the powder is thin as a result of the uneven distribution and the clogged pores will be further accentuated. It therefore becomes necessary to apply a great number of layers to try to obtain as many small heaps of powder as possible to improve the chance of an even distribution. Despite this, the distribution will remain considerably uneven, particularly where grains have accumulated in the irregularities of the skin.

It is therefore an object of the present invention to provide apparatus which will overcome the aforementioned defects and will achieve a perfect and lasting make-up application over the whole surface of the face.

It is a further object to provide apparatus which will achieve a very even distribution of the grains of coloring material and powder over the whole surface of the skin despite its irregularities. The resulting layer is of uniform thickness and is made up of several practically monogranular layers superposed on one another. Such a layer is herein designated a thin uniform layer.

It is yet another object to provide apparatus which will apply make-up with greater speed and with a greater economy of effort than is required when carrying them out by hand.

The apparatus in accordance with the invention comprises a palette comprising an arm on which a plurality of interchangeable applicators can be mounted one at a time, said applicators being suited for the respective make-up operations, and power-operated means for imparting to the palette a reciprocatory movement in a direction parallel to the surface of the skin and of selected frequency and amplitude. The applicator is so arranged on the arm as to afford maximum visibility of the area to which make-up is being applied. Moreover, means is preferably provided for controlling the amplitude and the frequency of reciprocatory movement according to the make-up operation being performed.

The nature, objects and advantages of the invention will be more fully understood from the following description and claims taken together with the accompanying drawings in which:

FIG. 1 is a longitudinal cross section of a portion of one embodiment of the apparatus;

FIG. 2 is a longitudinal section of the embodiment shown in FIG. 1 taken in a plane at right angles to that of the section in FIG. 1;

FIG. 3 is a plan view of a palette in detail;

FIG. 4 is a longitudinal cross sectional view of the palette shown in FIG. 3;

FIG. 5 is a transverse cross sectional view of the palette shown in FIG. 3;

FIG. 6 is a plan view of another palette in detail;

FIG. 7 is a longitudinal cross sectional view of the palette shown in FIG. 6;

FIG. 8 is a fragmentary cross sectional view showing the means for regulating the amplitude of the vibrations;

FIG. 9 is a cross sectional view of an applicator showing another means for regulating the amplitude;

FIG. 10 is a cross sectional view of a palette showing another means for regulating the amplitude;

FIG. 11 is a plan view of a palette showing another means for regulating the amplitude;

FIG. 12 is a side view, partly in section, of the palette in FIG. 11;

FIG. 13 is a plan view of a palette showing another means for regulating the amplitude;

FIG. 14 is a side view of the palette in FIG. 13;

FIG. 15 is a longitudinal cross sectional view of a third embodiment of the apparatus.

The apparatus of the present invention is particularly for carrying out the process of applying make-up described in my copending patent application, Serial No. 844,826, filed October 6, 1959, as a continuation-in-part of the present application.

The apparatus has an applicator which is in constant contact with a great number of grains as, for example, a soft, dense brush would be, and will have every chance of coming into contact with every grain in the area to which it is applied. Moreover, vibratory movement causes great acceleration of the applicator. As a result, when the applicator meets the grains, it applies this acceleration

to them, the amount depending on the effective mass of the make-up product at the point of application.

Finally, as the vibratory movements occur parallel to the surface of the skin, the applicator will move the grains along the surface of the skin and will not force the grains into the layer of previously applied materials and sebum. Actually, it will even prevent the grains from penetrating skin irregularities as it will cause the grains to move at such speed that they will be stopped only by friction between them and the layer of materials and sebum, and the grains themselves will not fall into irregularities of the skin.

In the case of powder, for instance, the small heaps of several grains will almost certainly be contacted by the applicator and will then be broken up into individual grains or several much smaller heaps. In this way, there will be achieved a thin uniform layer. In the same way, any grains accumulating in a wrinkle will be removed, the grains being carried away until practically a monogranular layer is left. In contrast, the usual manual method of powdering produces only a rubbing force substantially without acceleration and serves to rub the accumulated grains further into the wrinkle, thus accentuating the imperfection of the skin.

The frequency of the vibrations lies between two limits. The lower limit is the point beyond which the acceleration of the applicator, at a reasonable amplitude, is insufficient to permit the applicator to move the grains independently of the material surrounding them.

It can easily be seen that the determination of the frequency limit depends on the useful mass of the applicator at every point where the applicator contacts the grains. Consequently, the rigidity of the applicator is a factor as it relates this useful mass to the mass of the whole applicator. If A is the maximum acceleration during a cycle and if D is the amplitude and f the frequency of the vibratory movement, these element can be related by the formula $A=2\pi^2Df^2$. This formula is exact in the case of a sinusoidal movement and approximate in the case of a non-sinusoidal movement and indicates that the maximum value of the acceleration is proportional to the amplitude and to the square of the frequency. Considering this, and taking into account experiments conducted with usual materials at permissible amplitudes, the value of five cycles per second has been determined as the lower limit beyond which this process would lose too much of its efficiency.

The upper limit is fixed by several considerations which include the destructive effect that too great an acceleration has on the material forming the skin-contacting surface of the apparatus, on the make-up product, and on the skin itself. Here too, many elements have a bearing on the determination of this limit, particularly the nature and the shape of the skin-contacting surface of the applicator and the amplitude of the vibration. It has been found that using an applicator made of suitable materials, a maximum acceleration, well tolerated by the skin, at and amplitude of 0.5 to 5 mm. will be achieved at a frequency of approximately 100 cycles per second.

As the value of this acceleration varies along the trajectory of the vibratory movement, it is desirable to have a trajectory the length of which is at least several times greater than the maximum diameter of one of the grains, a diameter which can be fixed, as said before, at 10 microns. Thus the minimum amplitude of movement of the applicator on the skin should preferably be about 0.05 mm. With this in mind and applying the preceding formula, it will be seen that a frequency of 1000 cycles per second with an amplitude of .05 mm. produces an acceleration equivalent to 100 cycles per second with an amplitude of 5 mm. Hence the maximum frequency limit can be fixed at approximately 1000 cycles per second.

It has been found that for best results the frequency should be between 30 and 240 cycles per second and the amplitude should be between 5 and 1 mm.

Obviously, the skin-contacting surface or applicator of the apparatus must have a great number of contact points with the skin (these contact points should be separate in order to act on each grain independently of the other grains) without causing discomfort or irritation to the skin during the vibrations. Such an applicator will hereafter be called "suitable."

By using an apparatus of the invention not only will a beautiful and lasting make-up application result, but this application will be accomplished with greater speed, precision, and facility.

Two forms of apparatus will be described as illustrative examples only. These devices have a vibration generator (usually energized by electric current) in a suitable casing, with a palette connected to the vibration generator in such manner as to move an applicator parallel to the skin. The palette may have a rigid or flexible arm and is fitted at one end with a suitable applicator, the movement of which is parallel to the skin in the area being contacted.

The apparatus shown in FIGS. 1 and 2, has an electric vibration generator, the vibrations of which are transmitted by means of a rigid (or flexible) arm of a palette, to an interchangeable applicator. The apparatus satisfactorily carries out the process since the usual alternating current of 60 cycles will cause the applicator to vibrate at a frequency of 120 cycles per second if the moving mass is regulated in such a way that the vibration frequency of the applicator corresponds to the principal frequency of the electric generator and not to a harmonic. The applicator is connected to the arm so that its skin-contacting surface will be moved in a direction parallel to the skin.

The apparatus comprises an upper head **25** and a lower casing joined by a number of screws **27** screwed into metal lugs **28** which are countersunk into the casing **26**. The head **25** has a metal or plastic bearing sleeve **29** preferably made of a self-lubricating material, in which a shaft **30** oscillates. An arm **31** is fixed by a member **32** to one end of the shaft **30** and carries an oscillating armature **33**. A palette comprising a flexible arm **34**, fixed by a screw **35** to the other end of the shaft **30**, carries an applicator **36** on said flexible arm. A second arm **31** has an abutment **37** which supports one end of a spring **38** and a second abutment **39** which supports one end of an opposing spring **40**. The other ends of the opposing springs **38** and **40** are supported on fixed abutments **41** and **42** respectively, which are molded integrally with the head **25** or attached to ribs such as **43** of the head.

A laminated U-shaped electromagnet **44** having two poles **45** and **46** is connected to a rib **47** of the head **25** by bolts **48**. The pole **45** is surrounded by a coil **49** made of thin wires wound on a coil-form **50**. To the coil-form **50** is riveted at **51** a spring contact plate **52** on which is located a control button **53** and having a contact **54** at its end.

Current flows to the coil **49** through two prongs **55** and **56**, supported by an angle-shaped support **57** connected to the electromagnet **44** by bolts **58**. The prong **55** is connected directly to the coil, and the prong **56** being connected to a contact plate **59** adapted to be engaged by the contact **54**. When the control button **53** is pressed in, the contact **54** being connected to the other end of the coil winding.

The end of the pole **45**, as well as the end of the pole **46**, is shaped like an arc of a circle concentric with the shaft **30**. The armature **33** has an arcuate surface concentric with the shaft **30** and oscillates close to the arcuate ends of the poles **45** and **46**. During its oscillations, the armature **33** has a constant air-gap with respect to the end of the pole **45**, while it has a variable air-gap with respect to the end of the pole **46**: When the coil **49** is energized by alternating current, the armature **33** is caused to oscillate by the variation and direction change of the magnetic field, such oscillations being maintained by the

opposing springs 38 and 40. In the palette the flexible arm 34 carried by the outer end of the shaft 30 causes the applicator 36 to oscillate, providing the effect necessary for the make-up application.

As the applicators must be changed very frequently during a single make-up application, particular attention must be given to the means by which the applicator is attached to the flexible arm which connects it to the vibration generator so that an applicator can be attached and removed quickly and easily. In FIG. 2, the flexible arm 34 has a tapered opening 60 which holds a taper shank 61 of a circular applicator 36 to which is glued a material 62 which will be in contact with the skin. FIGS. 3, 4, and 5 show a pallette with flexible arm 63 to which an applicator 64 having a projection 65 is attached by inserting the projection 65 into non-parallel lips 66 and 67, thus forming a dovetailed joint.

FIGS. 6 and 7 show a palette 68 of another type and having an arm 68, the center of which is open, leaving two non-parallel edges 69 and 70. Into this opening is inserted an applicator 71 having a projection 72 which is wedged between the edges 69 and 70, to secure the applicator 71 to the arm 68.

The applicator should have certain characteristics to permit easy use of the apparatus. In particular, the applicator should have a skin-contacting surface which can act tangentially to the surface of the skin over the greatest possible area on which the applicator is being used. The surface of the facial skin involves large zones which are approximately level, and smaller zones with a small curvature radius, such as the sides of the nose. It will therefore be better, generally, to use an applicator which has a fairly level skin-contacting surface. This is not essential, but more logical. This surface should also be no larger than one make-up zone of the face. For example, a comfortable size applicator has a surface with an area equal to the area of the tips of two fingers. Preferably, the applicator used with the apparatus described would be round with a diameter of 30 mm. and would have a flat surface.

As another example, an ovoid applicator provided equally satisfactory results in use when applying make-up to special parts of the face. This ovoid applicator had a flat surface with axes of 12 mm. and 8 mm. and was used satisfactorily for the sides of the nose. Triangular shaped applicators have also been found useful in following the line of the cheek bone. It will be understood that each apparatus is supplied with a set of interchangeable applicators for the different functions required.

Finally, the skin-contacting surface of the applicator should be made of a material which will increase the probability of encounter between the contact points of the applicator and the grains of coloring material or powder. An applicator surface which is simply rough can accomplish this, but it is also necessary that the projections of the rough surface be small enough to be very numerous, and be neither sharp nor hard enough to injure the skin. Good examples of materials suitable for the surface of the applicator would include a brush with very soft fibrous material, or a soft cellular material like polyurethane or foam rubber. In the commercial production of the apparatus described, there was used for the various cosmetic materials, a polyurethane applicator 7 mm. thick; an applicator of very closely woven velvet having a pile 2 mm. long; an applicator of velvet or mohair (original animal hair) with a very close nap 12 mm. long; an applicator of velvet or mohair with a very short close pile (2 mm.); and an applicator of polyurethane 3 mm. thick.

The use of velvet or mohair has, in fact, been found extremely satisfactory and is one of the important details of the commercial apparatus described. When a brush is accelerated at 120 cycles per second, the bristles tend to stiffen considerably. Moreover, industrial machines, existing today, which set bristles into brushes, cannot set very fine hairs or very dense tufts to give a high and regular density. However, velvets are materials which are cut after weaving to produce a surface of small tufts of very close pile made by the warp or the weft, which overcomes the above-mentioned difficulties. The cost of velvet, its ease of manufacture, and the time saved by merely cutting out the necessary shapes, allow the applicators to be manufactured at a reasonable cost.

Moreover, the base of the velvet may be as thin as required, which is important with respect to the weight of the applicator, whereas a brush must be thicker to allow for setting length of the tufts.

It is also possible to use other materials which have the same characteristics as velvet; for instance, the so-called "terry cloth" materials with a loop surface, each loop consisting of two threads joined at their outer end; teased materials in which continuous threads have been cut by combing to make a nap; Jacquard materials and the like in which the pile is made by tufting.

It is useful to be able to regulate the amplitude of the vibratory movement on a given apparatus. Varying conditions such as type of material used for the applicator, kinds of skins to be made-up, shapes of applicators used for each make-up operation, may make it useful to control the amplitude of the vibrations of the applicator.

There are several methods of obtaining this control, either on the applicator itself or automatically when the applicator is changed.

One possible arrangement is shown in FIG. 8 in which a regulating screw, with a knurled button 73, is screwed at 74 to the casing of the apparatus. Pressure on the button 73 whose inward movement is limited by a stop 75 compresses a spring 76 which, with an opposing spring 77 maintains the oscillations of a laminated armature 78. Such pressure will affect the amplitude of the vibrations.

Moreover, every system of sustained acceleration has a resonance curve which determines the amplitude of the vibrations achieved as a function of the moving masses, as well as the radius to the center of gravity of these masses. All other conditions being set, the amplitude of vibrations of the applicators may therefore be regulated either by changing the weight of the applicator or by varying the distance between the oscillation axis of the flexible arm and the applicator itself, or by adding additional weights to the flexible arm at a fixed or adjustable distance from the axis of acceleration of the arm, or by combining these different methods.

As an illustrative example of one of these means, FIG. 9 shows an applicator 79, a projection 80 of which is threaded to allow the attachment of a nut 81 of suitable size and weight.

FIG. 10 shows another embodiment in which a shaft 82 has an exterior projection 83 threaded to receive a nut 84 of suitable size.

FIGS. 11 and 12 show a palette in which it is possible to change the arm distance between the applicator and its oscillation axis 86. The palette comprises an arm 85 which has at its upper end two conical openings 87 and 88 into which the projection of the applicator can be inserted, thus changing the oscillation radius of the mass.

In FIGS. 13 and 14 an adjustable device is shown in which a palette, oscillating around an axis 90, has an arm 89 with its upper end having a conical opening 91 into which is inserted the projection of the applicator. The arm 89 has a sheet-metal clasp 92 having lips 93 which slide along the arm 89. The clasp 92 has a flexible finger 94 which engages a groove 95, several of which are cut into the arm 89, thus fixing the clasp 92 at the desired position. The clasp 92 may also have an added fixed weight 96. With this device it is possible to regulate the amplitude of the apparatus by sliding the clasp 92 along the arm 89 to change the distance of the additional weight from the oscillation axis.

During the application of make-up, the apparatus is placed on the skin to apply the product and is removed

at times for various reasons including the desire to look at the effect thus far achieved. During these interruptions it is useless to have the apparatus vibrating and using electric current needlessly. It is better to avoid this unnecessary use of current to prevent the electrical circuit from overheating and also to keep the apparatus from vibrating in the hand. Consequently, a control button which acts as a switch has been provided on the apparatus. This control button **53** (FIG. 1), which was described earlier, works simply by contact of the fingers when the hand is holding the apparatus in position for use, and immediately stops the supply of current to the apparatus when the pressure of the fingers is removed.

Another convenient feature is concerned with the placing of the applicator in relation to the apparatus so that the apparatus is easily held and the operator can see herself clearly in a mirror while using the apparatus in order to watch the progress of the applicator. For this reason, the palette of FIG. 2 is made so that the lower edge of its applicator **36** is always above the upper edge of the casing **26**, so that in every case the operator sees an area of her face all around the applicator. It is for this reason, too, that the applicators have been made round, a circle allowing the best possible view at all times.

All the examples given above are merely illustrative and many other embodiments can carry out this invention. As an example, as is well known, the sheet-iron laminated armature may be replaced by a permanent magnet armature, in which case the vibration frequency will only be half as great.

By the shape and the elasticity of the applicators, the effect of the natural vibrations of the palette, which uses harmonics of the frequency of the vibration generator itself, can be obtained, thus extending the frequency scale. Varying the characteristics of the energizing current presents another way of changing the frequency or the amplitude of vibration; for instance, by using a rheostat or any other classic electrical control device which may be placed either inside or outside the casing of the apparatus.

An apparatus of a second type shown in FIG. 15 comprises a casing **116** in which a rotary electric motor **117** of the usual type with a field magnet and a rotatable armature revolves at a predetermined number of revolutions, for instance, 600 revolutions per minute. An eccentric cam **118**, turning at the same speed as the motor, actuates a follower **119** carried by an arm **120** fixed on one end of a counter-shaft **121** rotatably supported by a bearing **122**. The follower **119** is held against the cam by a spring **123**. A palette **124** fixed to the outer end of the countershaft **122**, will therefore oscillate with the arm **120**. An applicator **125** is fixed to the arm of the palette **124** in any of the ways previously described.

This apparatus is particularly convenient for using vibrations having frequencies near the lower limit as determined earlier. Moreover the frequency can readily be varied by varying the speed of the motor. The palettes of the preceding device can, of course, be used in this second species.

The invention thus provides an apparatus for applying and removing make-up which will effect a perfect and lasting execution of the basic make-up operations and which will execute them with great rapidity and with a minimum of effort.

In general, it will be understood that changes in the details, herein described and illustrated for the purpose of explaining the nature of my invention, may be made by those skilled in the art without departing from the spirit and scope of the invention as expressed in the appended claims. It is, therefore, intended that these details be interpreted as illustrative, and not in a limiting sense.

What I claim and desire to secure by Letters Patent is:

1. In apparatus for applying cosmetic material to the skin, a hollow casing having a greater length than width and of a size and shape to fit in the hand, a shaft extending through a side wall of the casing adjacent one end thereof with the axis of the shaft transverse to the length of the casing, an inner end of the shaft being inside the casing and an outer end of the shaft projecting laterally outside the casing, bearing means rotatably supporting said shaft, an arm fixed on the outer end of said shaft and having a free end extending beyond the end of said casing, an applicator carried on the free end of said arm, said applicator having a soft cosmetic-applying surface of substantial area facing away from said casing, motor means enclosed in said casing and driving means connecting said motor means to the inner end of said shaft to impart to said shaft an oscillatory movement of selected frequency and amplitude.

2. Apparatus according to claim 1, in which said arm is flexible.

3. Apparatus according to claim 1, further comprising means for variably selecting the amplitude of movement of said applicator.

4. Apparatus according to claim 3, in which said means for varying the amplitude of movement of said applicator comprises means for varying the distance between said applicator and said shaft.

5. Apparatus according to claim 3, in which said means for varying the amplitude of movement of said applicator comprises means for varying the moment of inertia of the oscillating assembly comprising said arm and applicator.

6. Apparatus according to claim 5, in which said means for varying the moment of inertia comprises a weight movably positioned on said arm at a selected distance from said shaft.

7. Apparatus according to claim 1, in which said motor comprises a rotary motor having a rotating shaft extending lengthwise of said casing and in which said driving means comprises means for converting rotary movement of said motor shaft to oscillatory movement of said transverse shaft.

8. Apparatus according to claim 7, in which said driving means comprises an eccentric cam on said motor shaft and an arm on said transverse shaft engaging said eccentric cam and movable by said cam with an oscillating movement.

9. In apparatus for applying cosmetic material to the skin, a hollow casing having a greater length than width, a shaft extending through a wall of said casing adjacent one end thereof with the axis of the shaft transverse to the length of the casing, an inner end of the shaft being inside the casing and an outer end of the shaft projecting outside the casing, bearing means rotatably supporting said shaft, motor means enclosed inside said casing, driving connection connecting said motor means to the inner end of said shaft to impart to said shaft an oscillatory movement of selected frequency, an arm fixed on the outer end of said shaft and having a free end portion extending beyond the end of said casing, an interchangeable applicator having a soft cosmetic-applying surface and means for removably and interchangeably affixing a selected applicator on the free end portion of said arm with the cosmetic-applying face of the applicator facing away from said casing, said applicator being moved back and forth in an arcuate path by the oscillation of said shaft.

10. In apparatus for applying cosmetic material to the skin, a hollow casing, a shaft extending through a wall of said casing, an inner end of the shaft being inside the casing and an outer end of the shaft projecting outside the casing, bearing means supporting said shaft for rotary movement, an outer arm fixed on the outer end of said shaft and having a free end portion extending beyond said casing, an applicator carried on said free end portion and having a soft cosmetic-applying surface facing away from said casing, an inner arm fixed on the inner end of said shaft inside the casing, spring means acting on said arm to hold it resiliently in a neutral position and to oppose resiliently movement of said inner arm

in either direction from said neutral position, said shaft, arms and spring means constituting an oscillatory system, and power means for applying force intermittently to said inner arm to impart oscillatory movement to said shaft and arms.

11. Apparatus according to claim 10, in which said power means comprises an electromagnet with a U-shaped core having spaced legs terminating in arcuate faces concentric with said shaft, means for cyclically energizing said magnet and an armature carried by said inner arm and moved from said neutral position by the magnetic force of said magnet when energized.

12. Apparatus according to claim 10, further comprising means for manually varying the resilient force exerted on said inner arm by said spring means and thereby varying the amplitude of oscillation of said shaft and arms.

13. Apparatus according to claim 1, in which said cosmetic-applying surface of the applicator comprises pile fabric having closely spaced pile with a pile length of 2 mm. to 12 mm.

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