The matter of proprietary remedies, of course, guides the price on many prescriptions. The professional store is always subject to the whims of a pharmaceutical manufacturer. He contends that he has done a lot of research work and is entitled to a good price, which we concede. But we do not think we should be forced to a twenty-five per cent gross profit for many reasons. *First*, we must give the ℞ special attention in respect to offering the preparations, sometimes obtaining them by special delivery or transportation, using part of the package plus a small turnover, and the repackaging of the same.

Our time is short on this subject, but I think it should have some discussion. In other words, a retail pharmacist in a laboratory all the time is working out individual problems and formulas, and each time he cuts a price on a prescription he injures himself, the profession and the customer for he destroys confidence in all of them. I am sure none of us would enjoy a pair of shoes without a lining even though the public does not see the inside of them.

Going back to the beginning of this paper, I would like to hear a discussion on the price of the ingredients in a prescription, whether the price is in proportion to the five-pound cost, or the quarter-pound cost if only a half ounce is used.

CUTICOLOR PREPARATIONS.*

BY BERNARD FANTUS[1] AND H. A. DYNIEWICZ.[1]

It is a remarkable fact that Calamine Lotion, first used in 1907, has become one of the leading preparations, in point of usage, of the National Formulary as shown by the Gathercoal report (1) from which we learn that, from a usage of 12.5 per 10,000 prescriptions in 1926, it has more recently been called for in 44 prescriptions per 10,000, and that the total prescription usage of calamine in all its forms amounted to 95 per 10,000 prescriptions.

In the Fourth (1916) Edition of the National Formulary, prepared calamine was described as "native zinc carbonate containing a varying amount of zinc silicate, calcined at a moderate temperature; or calcined zinc carbonate, containing a small amount of ferric oxide." In the Fifth and Sixth Editions of the National Formulary, prepared calamine was recognized as zinc oxide containing a small amount of ferric oxide. In other words, the native calcined mineral was substituted for by an imitation because a much more uniform product so far as color is concerned and one free from grittiness was thereby produced. That this substitution did not interfere with the usefulness of the preparation may be assumed in view of the progressive increase in usage of the lotion.

Even though it is freely admitted that calamine lotion may have other virtues than the fact that it is somewhat skin-colored, we have taken the proposition for our thesis that *skin-colored ("cuticolor") preparations should, in general, be preferred in dermatology to those with other colors, and that the use of skin-colored preparations is*

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* Presented before the Section on Practical Pharmacy and Dispensing, A. PH. A., Minneapolis meeting, 1938.

[1] From the Laboratory of Pharmacology and Therapeutics, University of Illinois, College of Medicine; and assisted by a grant from the AMERICAN PHARMACEUTICAL ASSOCIATION.

mandatory, so far as possible, on surfaces of the body exposed to view. If this proposition is to be carried out to its logical conclusion, then it is the duty of Pharmacy to furnish the dermatologist as complete a cuticolor materia medica as possible; and it has been our endeavor to make a start in this direction.

CUTICOLOR POWDER.

Since, in our opinion, calamine is nothing more or less than an attempt to give zinc oxide a skin color, it seems rational that a closer attempt at skin color should be made than is represented by the calamine which is pink rather than flesh-color and is not obtainable even in anything like standardized color.

We suggest the following formula with the hope that it might challenge further improvement:

I. ZINCI OXIDUM CUTICOLOR.

Cuticolor Zinc Oxide.

Red ferric oxide	3.0 Gm.
Yellow ferric oxide	4.0 Gm.
Zinc oxide	93.0 Gm.
Mix.	

The yellow ferric oxide, be it noted, is of the same chemical composition as the red ferric oxide (Fe_2O_3), the former being obtained by a cold process, while the latter is prepared with the aid of heat.

The chief change from the official calamine, which contains 98% zinc oxide and approximately 2% of red ferric oxide, is the addition of yellow ferric oxide which gives the powder a color closely matching that of an average Caucasian.

As an illustration of the manner in which cuticolor powder might be used as a vehicle for medicine, the following prescription may be cited:

℞ No. 1.

Precipitated sulfur	3.0 Gm.
Cuticolor powder	30.0 Gm.
Mix.	

It should be noted that, while in liquid preparations sulfur and the iron of calamine or of cuticolor powder are incompatible, there is no incompatibility with sulfur in dry preparations or in ointments.

We also offer a formula for cuticolor titanium dioxide, which is needed, because of better covering qualities, in the preparation of the cuticolor cream salve to be submitted.

II. TITANII DIOXIDI CUTICOLOR.

Cuticolor Titanium Dioxide.

Red ferric oxide	6.0 Gm.
Yellow ferric oxide	8.0 Gm.
Titanium dioxide	86.0 Gm.
Mix them by trituration.	

If this cuticolor titanium dioxide is employed instead of the cuticolor zinc oxide in all the other preparations here submitted, a much superior product is secured.

Should clinical trial justify the greater expense, it may become desirable to employ the titanium dioxide instead of the zinc oxide in all these preparations. We find the titanium dioxide a necessary ingredient of the cuticolor cream salve that may be used for covering skin blemishes.

CUTICOLOR LOTION.

In view of the popularity of calamine lotion, any attempt to improve its quality is of interest. We believe we have accomplished improvement of this lotion in two respects: *first*, by making it more nearly skin color; and, *secondly*, by lessening its rapid sedimentation rate. By using "cuticolor powder" instead of the mixture of calamine and zinc oxide as directed by the National Formulary, we secure a truly flesh-colored lotion; and, by adding to the lotion 2.5% bentonite, we obtain a perfect and practically permanent suspension.

For the stabilizing of calamine lotion, gums have been tried and found wanting. When acacia (2%) is used, there is a tendency for it to produce a cement-like sediment on standing, which cannot be reincorporated by shaking. Tragacanth (1%) and Karaya (1/2%) do not keep the material in suspension for any length of time. The general disadvantage of gums is that they are prone to fermentation and that on drying they leave a sticky film behind.

We therefore noted with interest the following formula published in the *Perfumer and Essential Oil Record* (2), which compares with the National Formulary preparation as follows:

Calamine Lotion, N. F. VI.		Calamine Lotion (Improved).	
Prepared calamine	80 Gm.	Calamine, sifted	140 Gm.
Zinc oxide	80 Gm.	Bentonite	30 Gm.
Glycerin	20 cc.	Zinc sulfocarbolate	40 Gm.
Solution of calcium hydroxide, to make	1000 cc.	Glycerin	40 cc.
		Witch-hazel extract	200 cc.
		Water	550 cc.
			1000 cc.

Bentonite.—The chief improvement in this formula is the stabilization secured by the bentonite. This interesting substance is a non-refractory clay, derived from the shale of the Fort Benton formation in the upper Missouri valley. It is also known as mineral soap or soap clay and consists chiefly of hydrous silicates of aluminum, magnesium and iron. Prominent characteristics are its colloidal nature and its ability to adsorb water with consequent diffusion through the liquid and formation of a slippery jell.

One per cent of bentonite in water yields a thin colloidal suspension. The more bentonite is used, the thicker the preparation becomes; and 2.5% is about as much as can be used in a lotion. Ten per cent gives a paste with a p_H of 7.445. It may be of interest to note, in passing, that bentonite is a good adsorbent for bases. Thus, 1.0 Gm. of bentonite adsorbs 0.35 Gm. of methylene blue, *i. e.*, one-third of its weight! There is, on the other hand, no appreciable adsorption of eosin.

The high degree of colloidality of bentonite is shown by line 4 of Table I: there being no sedimentation even after days of standing, excepting for some coarse particles contained in the bentonite. It is desirable that bentonite be freed from

TABLE I.—SEDIMENTATION LEVEL. DISTANCE OF THE UPPER SURFACE OF THE SEDIMENT FROM THE SURFACE OF THE FLUID AFTER STANDING FOR THE SPECIFIED TIME.

			15 Min.	30 Min.	45 Min.	60 Min.	75 Min.	24 Hrs.	96 Hrs.
1	Zinc oxide	1.6							
	water to	10.0	5 mm.	15 mm.	23 mm.	23 mm.	23 mm.	32 mm.	32 mm.
2	Calamine	1.6							
	water to	10.0	21 mm.	25 mm.	30 mm.	30 mm.	30 mm.	34 mm.	34 mm.
3	Calamine	0.8							
	zinc oxide	0.8							
	water to	10.0	17 mm.	21 mm.	28 mm.	28 mm.	28 mm.	33 mm.	33 mm.
4	Bentonite	0.3							
	water to	10.0	0	0	0	0	0	0	0
5	Calamine	0.8							
	zinc oxide	0.8							
	bentonite	0.1							
	water to	10.0	1 mm.	5 mm.	6 mm.	6 mm.	7 mm.	19 mm.	21 mm.
6	Calamine	0.8							
	zinc oxide	0.8							
	bentonite	0.2							
	water to	10.0	0	0	1 mm.	1 mm.	2 mm.	5 mm.	14 mm.
7	Calamine	0.8							
	zinc oxide	0.8							
	bentonite	0.3							
	water to	10.0	0	0	0	0	0	0	1 mm.
8	Calamine	0.8							
	zinc oxide	0.8							
	lime water to	10.0	25 mm.	29 mm.	30 mm.	30 mm.	30 mm.	33 mm.	34 mm.
9	Calamine	0.8							
	zinc oxide	0.8							
	bentonite	0.3							
	lime water to	10.0	5 mm.	9 mm.	10 mm.	10 mm.	12 mm.	18 mm.	19 mm.
10	Calamine	0.8							
	zinc oxide	0.8							
	karaya	0.05							
	water to	10.0	7 mm.	11 mm.	12 mm.	15 mm.	15 mm.	33 mm.	36 mm.
11	Calamine	0.8							
	zinc oxide	0.8							
	tragacanth	0.1							
	water to	10.0	8 mm.	10 mm.	10 mm.	10 mm.	12 mm.	15 mm.	20 mm.
12	Calamine	0.8							
	zinc oxide	0.8							
	acacia	0.2							
	water to	10.0	0	1 mm.	2 mm.	2 mm.	3 mm.	24 mm.	53 mm.

these coarse particles by decanting the solution from the sediment. It is, of course, still more desirable that bentonite, free from these coarse particles, be obtainable on the market. Until it is, the coarser particles should be sifted out by means of bolting cloth or separated from it by means of sedimentation.

When we add bentonite to calamine lotion in increasing quantities, we find that one per cent (line 5) and two per cent (line 6) are not quite sufficient to stabilize it; but that three per cent (line 7) does so, providing distilled water or rose water is used. When lime water is employed (line 9), the lotion sediments to 18 mm. below the surface level after 24 hours (Fig. 1). The bentonite also adds "body" to the lotion. It requires more than five per cent of bentonite to stabilize the lotion in the presence of lime water. That it is not the calcium but alkalinity which is responsible for the sedimentation noted is shown by the fact that sodium hydroxide solution of the same degree of alkalinity (approximately, p_H 10.0) produces the same degree of separation.

Bentonite is useful only for suspension of alkaline insoluble substances, *e. g.*, chalk. *By means of it we are able to produce a permanently stable chalk mixture!* All the acid lotions, such as lotion of lead and opium, white, yellow and black wash, that have a p_H of about 6.0, are incompatible with bentonite (p_H 8.0), which not only does not prevent sedimentation but even causes precipitation. It is undoubtedly a question of electric charges. True acids, including organic acids, such as benzoic acid, are also incompatible. On the other hand, carbolic acid, *i. e.*, phenol, not being a true acid, is compatible.

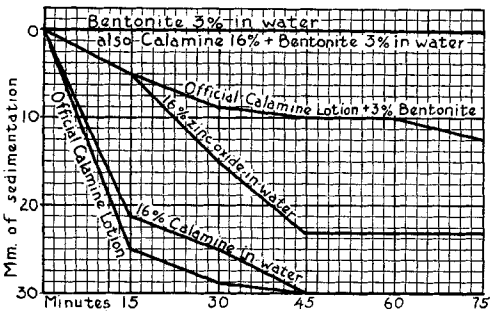

Fig. 1.—Sedimentation rate as shown by descent of the various curves.

NOTE: The rate of sedimentation of the official calamine lotion is lessened by bentonite; and there is no sedimentation in the cuticolor lotion.

The following formula is advanced for the preparation of an "improved calamine lotion" which contains rose water instead of lime water and 2.5% bentonite. By clinical test at the Cook County Hospital it has been found that this lotion gives the same results as those secured by calamine lotion. It is much better liked, and a 4-ounce bottle of cuticolor lotion seems to last as long in use as an 8-ounce bottle of calamine lotion.

III. LOTIO CUTICOLOR.

Cuticolor Lotion.

Cuticolor powder	15.0 Gm.
Bentonite	2.5 Gm.
Stronger rose water, to make	100.0 cc.

To prepare a smooth colloidal sol of the bentonite in rose water, mix the bentonite with the rose water and allow to stand for several hours, or over night, until the sandy sediment has deposited, and then decant. To the cuticolor powder in a mortar add the bentonite sol in portions, with trituration after each addition. Gradually add sufficient rose water-bentonite sol to make the product measure 100 cc.

We also offer the following formula as an improvement over the phenolated calamine lotion:

IV. LOTIO CUTICOLOR PHENOLATA.

Liquefied phenol	0.5 cc.
Cuticolor lotion, to make	100.0 cc.

Mix.

The percentage of phenol has been intentionally reduced to 0.5% as dermatologists consider this sufficiently strong and preferable to the greater concentration.

That this cuticolor lotion may be used as vehicle for certain dermatologic remedies, the following prescriptions may show:

℞ No. 2.		℞ No. 3.	
Resorcinol	10.0 Gm.	Solution of coal tar	10.0 cc.
Cuticolor lotion, to make	100.0 cc.	Cuticolor lotion, to make	100.0 cc.

As previously mentioned, sulfur must not be added to cuticolor lotion as it produces a black precipitate with the iron.

A further decided improvement of the lotion is secured when cuticolor titanium dioxide is employed instead of the zinc oxide.

CUTICOLOR CREAM.

Since calamine lotion is frequently too drying in its effect, calamine liniment is used as a succedaneum in such cases. Unfortunately, this preparation is entirely innocent of cosmetic qualities. We believe we have introduced such qualities in the following formula that we would like to recommend as an improvement over the calamine liniment.

V. CREMOR CUTICOLOR.

Cuticolor Cream.

Compound spirit of rose geranium	0.3 cc.
Cuticolor powder	15.0 Gm.
Olive oil	50.0 cc.
Solution of calcium hydroxide, to make	100.0 cc.

Mix the cuticolor powder with the olive oil, and gradually add the solution of calcium hydroxide, with constant agitation; and finally the compound spirit of rose geranium.

To give this dermatotherapeutic preparation some cosmetic qualities, we tentatively suggest the employment of a "compound spirit of rose geranium" for which we submit the following formula:

COMPOUND SPIRIT OF ROSE GERANIUM.

Oil of spearmint	1.5 cc.
Oil of rose geranium	10.0 cc.
Alcohol, to make	100.0 cc.

This spirit might also be useful for the flavoring of other skin remedies. It is, of course, very much less expensive than is oil of rose.

We believe we need such formulas in the N. F. in view of the present poverty of our official books in flavoring preparations.

In explanation of the proposed title "cuticolor cream" we desire to point out that the term "liniment" should, in our opinion, be applied only to preparations that are to be rubbed in. Neither "calamine liniment" nor "lime liniment" are

thus employed. We therefore believe that the term "cream" should be used instead of "liniment."

CUTICOLOR PASTE.

Bentonite is so colloidal as to produce a beautiful, smooth paste when mixed with water. The following formula is offered with the hope that it might find use in dermatology by reason of its clinging quality: the bentonite causing the powder to adhere to the skin quite tenaciously in form of a water-soluble skin-colored film.

VI. PASTA CUTICOLOR.

Cuticolor Paste.

Liquefied phenol	0.5 cc.
Cuticolor powder	15.0 Gm.
Bentonite (sifted)	10.0 Gm.
Stronger rose water	75.0 cc.

Mix the bentonite (sifted through bolting cloth) with the rose water and the phenol and permit to stand until a jelly has formed. To the cuticolor powder contained in a mortar, add this gel and triturate until a smooth paste results.

Cuticolor paste is essentially the solidified cuticolor lotion. Its therapeutic qualities will therefore be the same as those of calamine lotion over which it has the advantage that a thicker film may more readily be applied. Some preservative is necessary because of the tendency for this paste to develop mold growth on standing. One-half per cent of phenol should not only be unobjectionable when used for this purpose, but might also add an antipruritic quality. It is essentially a "mud pack" formula.

This paste may be medicated by the same agents that may be used with calamine lotion. It is improved by the employment of titanium dioxide instead of the zinc oxide.

CUTICOLOR VARNISHES.

It seems that dermatology will be enriched in its resources by the introduction of varnish preparations of various kinds: for a dermatotherapeutic agent should at least stick to the surface to which it is applied until it has accomplished its purpose, just like a good postage stamp.

The following two cuticolor varnishes might be of use: "cuticolor tragacanth paste" and "cuticolor gelatin paste."

VII. PASTA TRAGACANTHÆ CUTICOLOR.

Cuticolor Tragacanth Paste.

Liquefied phenol	0.5 cc.
Compound spirit of rose geranium	0.5 cc.
Tragacanth	5.0 to 7.0 Gm.*
Cuticolor powder	15.0 Gm.
Glycerin	5.0 cc.
Water	80.0 cc.

* According to quality of the tragacanth.

Mix the powdered tragacanth with the water to which the glycerin and phenol have been added and permit to stand for 24 hours. Strain through cheese cloth. To the cuticolor powder in a mortar add the tragacanth paste in portions with active trituration until a smooth paste results, and finally add the compound spirit of rose geranium.

Owing to the proneness of tragacanth gel to mold, preservative is necessary and we have chosen phenol for the above-stated reason. This paste should have a special value for the treatment of facial dermatitis, such as that occurring in "infantile eczema." It should likewise, suitably medicated, be superior to many ointment formulas for covered portions of the body.

VIII. PASTA GELATINI CUTICOLOR.

Cuticolor Gelatin Paste.

Glycerinated gelatin	20.0 Gm.
Glycerin	35.0 cc.
Cuticolor powder	10.0 Gm.
Distilled water	35.0 cc.

Mix the cuticolor powder with glycerin, add water and incorporate with glycerinated gelatin previously melted on the water-bath. Continue mild heat, with stirring, until a homogeneous mixture is obtained; then pour into chilled molds and allow to congeal.

This preparation is advocated for the application of "Unna's boot" in the treatment of varicose eczema of the lower extremities instead of the "dead white" zinc glycerogelatin, the color of which, because so conspicuous, is objectionable, most especially to women.

CUTICOLOR OINTMENTS.

The calamine ointment of the National Formulary is quite devoid of cosmetic qualities; and we believe that, in offering the subjoined formula for cuticolor ointment, we at one and the same time furnish an improvement upon calamine ointment and a "sunscreen" preparation that can be made with readily available, inexpensive, official substances. The sunscreen value is shown by the protective value of cuticolor ointment since this ointment protects against sunburn.

IX. UNGUENTUM CUTICOLOR.

Cuticolor Ointment.

Cuticolor powder	15.0 Gm.
Liquid petrolatum	10.0 cc.
Woolfat, anhydrous	12.5 Gm.
Yellow petrolatum	37.5 Gm.
Stronger rose water	25.0 cc.

Mix the yellow petrolatum and woolfat and incorporate the stronger rose water in small portions until completely emulsified. To this add the cuticolor powder and triturate thoroughly until well mixed. Finally add the liquid petrolatum and mix until the product is smooth.

This ointment may, for example, be used as a base for the following prescriptions:

℞ No. 4.

Precipitated sulfur	6.0 Gm.
Cuticolor ointment	24.0 Gm.

Mix.

℞ No. 5.

Ammoniated mercury	1.2 Gm.
Cuticolor ointment	30.0 Gm.

Mix.

℞ No. 6.

Salicylic acid	1.0 Gm.
Cuticolor ointment	30.0 Gm.

Mix.

For cerate consistency we offer the following formula:

X. CERATUM CUTICOLOR.

Cuticolor Cerate.

Cuticolor powder	15.0 Gm.
White wax	4.0 Gm.
Woolfat, anhydrous	4.0 Gm.
White petrolatum	77.0 Gm.

Melt the white wax with the woolfat and the white petrolatum. Mix the cuticolor powder intimately with the melted mixture so as to produce a smooth, homogeneous cerate.

This is identical with the formula for calamine ointment ("Turner's Cerate") of the National Formulary, excepting for the employment of cuticolor powder instead of calamine, and of white wax and white petrolatum instead of the yellow varieties.

We also offer a formula for a skin-colored "vanishing cream" that might have special value as a covering for skin blemishes.

XI. CREMENTUM* CUTICOLOR.

Cuticolor Cream Salve.*

Cuticolor titanium dioxide	30.0 Gm.
Glycerin	1.5 cc.
Vanishing cream	70.0 Gm.

Mix thoroughly.

* We propose the term "crementum" for the Latin and "cream salve" for the English title of vanishing cream. We suggest that the term "cream" (Lat. cremor) be used in Pharmacy to indicate water emulsions of liquid consistency and "cream salve" (Lat. crementum) for water emulsion of ointment consistency. We also believe that the term "water emulsion" should be preferred to "oil-in-water emulsion" and "oil emulsion" to "water-in-oil emulsion."

We believe that this preparation should find good use for the covering of skin blemishes; and, if the standard color does not sufficiently match the individual skin on which it is to be applied, a light covering of the individual's special "face powder" will complete the covering of the objectionable mark.

The following formula for "vanishing cream" is also submitted with the hope of its possible simplification and final adoption by the National Formulary.

XII. CREMENTUM.

Cream Salve. Vanishing Cream.

Sodium borate	1.5 Gm.
Triethanolamine*	1.5 cc.
Woolfat, anhydrous	2.5 Gm.
Cetyl alcohol**	5.0 Gm.
Liquid petrolatum	6.5 cc.
Stearic acid	15.0 Gm.
Water	75.0 cc.

Melt the stearic acid, liquid petrolatum, cetyl alcohol and woolfat at 70° C. In another vessel heat the triethanolamine, sodium borate and water to the same temperature. Add the melted wax mixture to the triethanolamine solution and stir until homogeneous. Then stir occasionally until cool.

* *Triethanolamine.*—This is an ammonia-like organic base, of a high degree of emulsifying power, due to the fact that it combines with acid materials to form soap-like compounds. Although it is not official, its pharmaceutic qualities are such that it deserves to be known and used.

** *Cetyl alcohol,* obtained by purification procedures from spermaceti (cetaceum), is an excellent emulsifier and stabilizer in emulsions imparting to them a smoothness and whiteness otherwise not obtainable. It is perfectly stable and never turns rancid and in these ways is superior to spermaceti.

OTHER SKIN COLORS.

The proposed coloring of cuticolor powder might qualify as an average "brunette" shade, which seemed to match the majority of skins on which it was tried. It may possibly be desirable to introduce variations such as "blonde," "tan" and "brown."

To illustrate how easy it is to secure other skin coloring we offer the following formula for brown cuticolor powder:

XIII. PULVIS CUTICOLOR BRUNUM.

Brown Cuticolor Powder.

Red iron oxide	20.0 Gm.
Yellow iron oxide	4.0 Gm.
Blood charcoal	14.0 Gm.
Zinc oxide	62.0 Gm.

It is obvious that all the various cuticolor preparations above described can be made with the brown cuticolor powder instead of the other. We may illustrate this use by the following formula:

XIV. LOTIO CUTICOLOR BRUNA.

Brown Cuticolor Lotion.

Brown cuticolor powder	15.0 Gm.
Bentonite	2.5 Gm.
Stronger rose water, to make	100.0 cc.

Prepare in the same manner as cuticolor lotion (III), see above.

SUMMARY.

1. Skin-colored preparations ("cuticolor preparations") should in general be preferred in dermatology over those of other colors and their use is mandatory so far as possible on surfaces of the body exposed to view.

2. Calamine should be improved by making its color more nearly that of the average Caucasian skin. This can be done by the addition of 4% yellow ferric oxide and the name "cuticolor powder" is proposed for it.

3. Calamine lotion can be improved by the use of cuticolor powder and the addition of 2.5% bentonite. The name "cuticolor lotion" is proposed for this improved preparation.

4. Bentonite is an excellent suspending medium for calamine, zinc oxide, precipitated chalk and other non-acid bodies.

5. A bentonite paste is offered as a possibly useful drying pigment for the skin.

6. Two different formulas are offered for water-soluble varnishes to be applied to the skin: one with tragacanth and the other with gelatin, as these are required for different purposes.

7. We offer formulas for three different cuticolor salves: "cuticolor ointment," "cuticolor cerate" and "cuticolor cream salve" as these may be needed for different effects.

8. A formula for cuticolor titanium dioxide as well as for brown cuticolor powder is given, the former as an improvement over the zinc oxide preparation and the latter for the purpose of matching brown skin color.

CONCLUSION.

All applications to the exposed surface of the skin should be made with the use of skin-colored preparations.

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HOSPITAL PHARMACY STANDARDS DEPENDENT ON ORGANIZATION.*

BY HAZEL E. LANDEEN.[1]

The Tower of Babel, the world's first skyscraper, was a failure because of hurry. The workers mistook their arrogant ambition for inspiration. They had too many builders and no architect. They thought to make up the lack of a head by a superfluity of hands. This is a characteristic of hurry. It seeks ever to make energy a substitute for a clearly defined plan—the result is ever as hopeless as trying to transform a hobby horse into a real steed by brisk riding.

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* Presented before the Sub-Section on Hospital Pharmacy, A. PH. A., Minneapolis meeting, 1938.

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