

Pharmacopœia gives very complete tables of percentages and specific gravities of Alcohol, Ammonia Water, Acetic, Hydrochloric, Nitric, Sulphuric and Phosphoric Acids. The specific gravity of any substance is expressed by the quotient obtained by dividing the weight of a given measure of the substance by the weight of an equal measure of water. In pharmacy the specific gravity of solids is not of any importance, but that of liquids is a matter of constant value, and is determined in most cases by means of a specific gravity bottle or by a hydrometer, instruments which are described in any standard work on chemistry or physics. Modifications of the hydrometer with scales adapted to particular work are the urinometer, saccharometer, lactometer, etc.

Specific Volume is the relative bulks of equal weights of different bodies. In pharmacy it means the volume of the weight of a liquid compared with the volume of an equal weight of water at 77° F. The specific volume of a body is therefore inversely as its specific gravity, and is expressed by the quotient obtained by dividing unity by the specific gravity. $\frac{1}{\text{sp. gr.}} = \text{sp. vol.}$ and therefore $\text{sp. gr.} \times \text{sp. vol.} = 1$.

PRESCRIPTIONS.

Extemporaneous Prescriptions are formulæ written on the instant (*ex tempore*) to meet the requirements of individual cases.

A prescription should begin with the name of the person for whom it is designed and the date on which it is written. Then follows the Latin word *Recipe*, usually abbreviated to the sign *R*, and signifying "Take;" next, the names and quantities of the ingredients to be used, which are also expressed in Latin; then the directions to the compounder, followed by the directions to the patient, the last being now usually expressed in English; and finally the signature and address of the prescriber.

A prescription then has four component parts, as follows: the—

Superscription,—consisting of the name of the party for whom it is designed, the date and the sign *R* signifying "Take thou."

Inscription,—the body of the prescription, consisting of one or more of the following sub-divisions: the—

Basis,—or chief, active ingredient.

Adjuvant,—to assist the action of the basis.

Corrective,—to correct some injurious quality of the other ingredients.

Vehicle or Excipient,—giving the prescription a suitable form.

Subscription,—the directions for the compounder, usually expressed in contracted Latin.

Signature,—the instructions for the guidance of the one administering the medicine, expressed in English, followed by the signature of the prescriber.

A prescription may, however, contain the base alone, or the base with the adjuvant, or the base with a simple vehicle or diluent. A single ingredient may serve a double or a triple office, as the *Syrupus Rhei Aromaticus* with Quinine, in which case the syrup serves as an adjuvant to increase the action of the quinine, as an excipient to cover the taste, and as a vehicle to facilitate the administration of the dose directed. Again, the basis may need no aid in doing its work and may require no corrective of its action nor any special vehicle. On the other hand, there is no limit to the number of ingredients which may be used, provided that the prescriber has a clear idea of something to be accomplished by each one, and that there is no chemical or medicinal incompatibility between them. In olden times prescriptions were very complex and contained a great many curious and incongruous ingredients. As Dr. Piffard has well said, "the tendency of the present age is toward mono- rather than poly-pharmacy, and prescriptions with the orthodox *adjuvans* and *corrigens* are less frequently seen than formerly." There is danger, however, in carrying this simplicity too far, for there is no doubt that proper combinations of medicines will often produce effects for the patient's good which could not be obtained from the use of any one remedy.

PROCEDURE IN WRITING A PRESCRIPTION.

In writing an extemporaneous prescription, the first step is to write the patient's name and address, the date and the sign *R*. Then the title of each ingredient should be written in Latin and in the genitive case, except that when a certain number only of an ingredient is ordered the name of the ingredient should be in the accusative case, for example, "*Vitellum unum*,—one yolk-of-egg." Next, the quantity of each ingredient sufficient for one dose should be mentally determined and multiplied by the number of doses which the mixture is to contain, and the result set down in signs and Roman numerals. The directions to the pharmacist and patient being added and the prescriber's name or initials affixed, the prescription is completed; but when very active agents are used, it is a good plan to go over the calculations a second time before letting the prescription leave the hands of the person most responsible for the result. For pills or powders the same process should be employed, slightly varied according to the requirements of each case. Frequently the ingredients and quantities for but one pill, powder or suppository are named, with instructions to make a certain number after the formula. When an unusually large dose of any poisonous drug is prescribed, it is customary to underline the quantity, so as to call the attention of the compounder to the fact that the prescriber is aware that the dose is above the average.

An Example will perhaps make the foregoing more comprehensible, and at the same time serve to indicate the style of writing usually employed. The following formula represents the preparation known as *Black Draught*, but

officially styled the *Compound Infusion of Senna*; approximate weights and measures being substituted for the pharmacopœial metric weights.

For Mrs. Gray.		July 7th, 1905.	} SUPERScription.
Recipe, Take,—			
(Basis.)	{	<i>Sennæ semiunciam,</i> Of Senna, half an ounce, <i>Magnesi Sulphatis,</i> Of Magnesium Sulphate,	} INSCRIPTION.
(Adjuvant.)	{	<i>Mannæ, ana unciam unam,</i> Of Manna, of each an ounce,	
(Corrective.)	{	<i>Fœniculi, drachmam unam,</i> Of Fennel, one drachm,	
(Vehicle.)	{	<i>Aquæ Bullientis, fluiduncias octo,</i> Of Boiling Water eight fluid-ounces.	
<i>Macera per horam in vase clauso, deinde cola.</i> Macerate for an hour in a closed vessel, then strain.			} SUBSCRIPTION.
<i>Signetur, Let it be entitled,—A wineglassful every four hours until it operates.</i>			} SIGNATURE.
J. F. Wood, M.D.			

Abbreviated in the style usual among physicians, the above prescription would read as follows,—

For Mrs. Gray.		July 7th, 1905.
R̄.	<i>Sennæ,</i>	ḡss.
	<i>Magnesi Sulphat.,</i>	
	<i>Mannæ,</i>	āā ḡj.
	<i>Fœniculi,</i>	ḡj.
	<i>Aquæ Bull.,</i>	f ḡviii.
<i>Mac. per hor. in vase clauso, deinde cola.</i>		
<i>Sig.—A wineglassful every four hours, until it operates.</i>		
Wood.		

As the result of the above is nearly identical with the official preparation, we might write the same prescription more simply, as follows,—

R̄. *Injusi Sennæ Compos.,* ḡviii.

with the proper superscription and signature; this being the manner of prescribing the official preparations.

It will be noticed that in the above analysis the term *basis* covers two ingredients; but it is obvious that either of them might be considered the principal agent, and the other one classed as an adjuvant.

“These four parts of a formula are intended to accomplish the object of Asclepiades, *curare cito, tute et jucunde*; in other words, to enable the basis to cure quickly, safely and pleasantly.” (Pareira.)

Another Example will illustrate the mental operations which should always be followed by a prescriber; for no matter how good a memory he may have, he will some day make a grievous mistake if he follows the practice of writing prescriptions from memory. Furthermore, the unscientific character of the latter habit will, when appreciated, prevent any educated physician from indulging in it. Every prescription should be written with a definite purpose in view, consequently the mind of the prescriber should weigh each step carefully and should avoid all slavish subjection to ready-made formulæ.

Suppose, then, that we wish to order for Miss Graham an emulsion of Castor Oil, flavored and sweetened so as to make it less disagreeable to the taste than it naturally is. If the ingredients were simply mixed together, as in the previous example, the result would be an unsightly preparation, consisting of sweetened and flavored water with the oil floating on top. So we require that the process of emulsification be first accomplished, by which the oil is minutely subdivided and suspended in the water by the aid of the emulsifier, which may be any viscid excipient, as gum, soap, or yolk-of-egg. Taking the last-named for the emulsifying agent, we would begin by writing down in order the following terms as stated below in italics, viz.:—

For Miss Graham.	June 10th, 1905
R̄. (Take thou—)	
<i>Olei Ricini,</i> (of Oil of Castor),	
<i>Vitellum,</i> (Yolk-of-egg),	
<i>Tere bene simul; dein adde—</i> (Rub well together; then add—)	

Having gone so far, we begin to think of an agreeable vehicle, and choosing from the many syrups at our disposal that of Ginger, and from the flavored waters that of Cinnamon, we write further for these as the ingredients to be added, thus—

Syrupi Zingiberis, (of Syrup of Ginger),
Aquæ Cinnamomi, (of Cinnamon Water).

The ingredients are now all entered upon the prescription, but their respective quantities have not yet been decided upon. We proceed then by first taking into consideration the total quantity of the medicament required,—which, in this case, as the preparation is intended to purge the patient, need not embrace more than one or two doses. As it is well to provide for a repetition of the dose, in case the medicine should not act sufficiently, we will decide upon two doses in all. Now, the average adult dose of Castor-oil is about a tablespoonful or half-an-ounce, and as we want two such doses we insert the sign and numerals ḡḡj, or simply ḡj, opposite the title of the oil which is written in the genitive case. But to emulsify it properly we need about one-half as much of the emulsifying agent, and we may express this by writing for half-an-ounce of yolk-of-egg, or for the yolk of one egg, or for one yolk-of-egg, which weighs about half-an-ounce. This would be expressed in Latin by either of the following methods,—

Vitelli semi-unciam, (ḡss). One-half-ounce of Yolk-of-egg.
Vitellum ovi unius, (j). The Yolk of one egg.
Vitellum unum, (j). One Yolk-of-egg.

As the word *Vitellus* means Yolk-of-egg, we may omit the word *Ovi*, and accepting the latter as the best style, insert the numeral j opposite the word *Vitellum*, which is properly in the accusative case. The whole quantity so far specified is one ounce and a half, and if we add two and a half ounces of diluent we shall have a four-ounce mixture, or the full of a regular-sized bottle as found in the shops. There being considerable viscosity already present in the emul-

sion we do not need much syrup, so we assign to the Syrup of Ginger the odd half-ounce, leaving two ounces of the Water to make up the total bulk of four fluid-ounces.

The prescription now only requires for its completion that the subscription and signature be added. We proceed to admonish the dispenser by telling him to mix the ingredients together, writing therefore the word *Misce*, or the abbreviation *M* commonly used therefor; and to further point out the nature of the preparation we add, *Let be made an emulsion*, or in Latin, *Fiat emulsum*,—the passive verb taking as predicate-nominative the thing into which the making is to be. The final direction *Label* or *Write thus*, is expressed by the term *Signetur*, *Let it be entitled*, followed by the instructions for the patient or the person who is to administer the medicine, which should be in English though they may be written in Latin. Our completed prescription will stand thus,—

<i>For Miss Graham.</i>	<i>June 10th, 1905.</i>
<i>R. Olei Ricini,</i>	$\bar{5}j.$
<i>Vitellum,</i>	$j.$
<i>Tere bene simul, dein adde—</i>	
<i>Syrupi Zingiberis,</i>	$\bar{5}ss.$
<i>Aquæ Cinnamomi,</i>	$\bar{5}ij.$
<i>M. Fiat emulsum.</i>	
<i>Sig.—“One-half at once, to be repeated next day if required.”</i>	
	<i>Potter.</i>

The last entry of the inscription might be written—*Aquæ Cinnamomi, quantum sufficiat ad $\bar{5}iv$* , meaning “of Cinnamon-Water as much as may be necessary to [bring the whole quantity to] four ounces,” usually expressed in contracted style, thus—

Aq. Cinnamomi, q. s. ad $\bar{5}iv$.

This style is preferred when any of the quantities are approximations, and the final item cannot be exactly stated to secure a certain total. In the foregoing case, the one yolk-of-egg might measure a little more than the half-ounce assigned to it; but by using the *q. s. ad* style at the end, we make sure of getting a total of exactly four fluid-ounces.

THE USE OF LATIN IN PRESCRIPTIONS.

The use of the Latin language in writing prescriptions is a sore point with a certain class of patients who like to know what they are taking, or wish to exercise their critical judgment upon the prescription of a physician in whose learning, skill and judgment they professed to have confidence when they consulted him. This feeling crops out frequently in our State legislatures, where bills are periodically introduced making it a crime for a physician to write a prescription in any other than the vernacular tongue. It is well for the student to know the reasons for maintaining the use of a dead language in the ordinary affairs of life. These reasons are as follows:—

The names of plants vary in every modern language, and even in the same language several different plants not infrequently receive the same common name.

For example,—the name “Starwort” is given to *Aletris farinosa* and *Helonias dioica*; “Colic-root” is one of the names of *Aletris farinosa*, also of *Dioscorea villosa* and *Liatris spicata*; “Mandrake” is applied to *Podophyllum* and *Mandragora*; “Winter-green” to *Chimaphila* and *Gaultheria*; and “Snake-root” to five different plants,—*Asarum*, *Cimicifuga*, *Eryngium*, *Senega* and *Serpentaria*. There are many other instances of this diverse nomenclature in English, and as each plant has a different name in French, another in German, and still another in Italian, Spanish, Dutch, etc., the confusion, in so polyglot a country as this, would cause innumerable errors if any but a generally understood language were used in prescriptions. Latin is such a language, it is the accepted language of science throughout the world, the Latin names of plants are definite and cannot be confounded, and a prescription written in Latin by a physician of any nationality, in any part of the civilized world, can be readily understood and correctly compounded by a pharmacist in any other civilized country.

Another reason, formerly more potent than at present, is the protection to the patient which the secrecy of a Latin prescription affords. A prescription ordering mercury and potassium iodide in plain language would be an awkward thing to send by one's child or servant to be put up, or to have ordered by telephone to be sent to Mrs. C. B. of a certain number and street. Again, there exists in many cases a strong prejudice against certain names of drugs, usually borne of ignorance but none the less potent, and in such it becomes necessary for the patient's good to conceal from him the name of the medicine he is taking. In this age of free education in all branches and the consequent smattering of everything possessed by almost everybody, the use of Latin does not afford the necessary secrecy, and the physician who does not dispense his medicines is often compelled to resort to private formulæ deposited by him with a certain druggist. In France it is a criminal offense to make known or expose the contents or nature of a prescription to any person other than the party for whom it was written, the law recognizing the fact that prescriptions may betray secrets which should be carefully guarded.

Opium, Morphine, Cocaine, and other agents likely to cause drug-habits, should never be ordered on written prescriptions for neurotic or hysterical subjects. The physician should keep such drugs in his own hands and thereby retain the absolute control of their administration in every case in which he finds it necessary to use them. He should protect his patient from such a result as drug-slavery by every means in his power. Many of the worst cases of the cocaine-habit, known to the author, were acquired by the use of cocaine in nasal sprays prescribed by physicians; and similar methods are responsible for many of the wrecks made by indulgence in opium and morphine.

There is no royal road to prescription-writing; practice, care and knowledge of the whole subject are necessary to enable one to turn out habitually those elegant prescriptions which are properly termed “magistral,” being the work of a *magister* or master of his business. A fair knowledge of the Latin language

is a *sine qua non* to every professional man but especially to the physician. It is pitiable to see a Doctor write ignorantly of even the genitive case endings of the drug-names which he uses. The teaching of Latin is not within the scope of this work, and this part of the subject will be concluded with the advice to the physician who is ignorant of that language to write his prescriptions wholly in English if he cannot write them in decent Latin. A very full table of the Latin words, phrases and contractions used in prescription-writing, also a table of genitive case endings, will be found in the Appendix; but for a complete treatment of the subject the reader should consult Pareira's *Selecta à Prescribitis* in which every detail of prescription-writing is explained.

PRINCIPLES OF COMBINATION.

The principles of combination are so well laid down by Dr. H. C. Wood that his words are appended *verbatim*, as follows:—

The art of combining medicines is not a difficult one; but in practice certain principles should not be lost sight of. Chief of these are, to prescribe as few remedies as possible, and to use no powerful drug without a very distinct idea of what it is intended to do. Whenever it is desired to give a powerful remedy in increasing doses until its physiological effect is produced, it should always be given by itself. Thus, it may be necessary to give Arsenic so as to impress the system, at the same time that Iron is indicated; but the two remedies should be given separately, so that the dose of either can be increased or diminished independently of the other. The principles of combination formulated below were long ago enunciated by Dr. Paris, but are today as imperative as ever. Medicines are combined—

First. To augment, correct, or modify the action of a medicine. Thus, purgatives act much more kindly when a number of them are united together. The chief reason of this probably is, that as different remedies affect different portions of the gut, the whole intestine is best reached by a union of the diverse substances. It may take an intense irritation of the mucous membrane to purge as actively as does a mild irritation of both the mucous membrane and the muscular coat.

There are powerful medicines which act similarly upon some parts of the organism but dissimilarly upon other parts. By combining such remedies powerful effects can be obtained at the points where the two lines of action cross each other, without influencing to a great extent other portions of the system. Thus, Chloral produces sleep by its action upon the brain, and also has a distinct influence upon the heart but none upon the intestinal tract. Morphine acts upon the brain and does not influence the heart, but has a powerful effect upon the intestinal tract. By combining Chloral and Morphine we get an overwhelming conjoined influence upon the brain in producing sleep with the least possible disturbance of the heart and of the intestinal tract.

Secondly. To obtain the joint action of two or more diverse remedies. Thus, in a cough mixture Morphine may be included to quiet the cough, whilst Ipecacuanha and Squill (in accordance with the first principle) are added to affect the mucous membrane. The application of this principle requires caution,

or the practitioner will be led into that chief abomination—polypharmacy. It is worse than futile to attempt to prescribe for every symptom. The underlying cause of the disorder or the understratum of bodily condition must be sought out and prescribed for simply.

Thirdly. To obtain a special combination, which is really a new remedy or which experience has shown acts almost as a new remedy. Thus, when to Iodide of Potassium in solution Corrosive Sublimite is added, a new chemical compound is formed, which experience has shown to be of great value in syphilitic diseases. Griffith's antihectic mixture is another instance of the use of chemical changes, the Proto-carbonate of Iron being formed out of the Sulphate of the metal and the Carbonate of Potassium. In the famous Dover's powder no chemical change occurs, but the ordinary action of Opium upon the skin is so enhanced that the combination may be looked upon almost as a new remedy.

Fourthly. To afford a suitable form. Thus, Acacia is added to make an emulsion or Confection of Rose to make a pill. In the choice of excipients care should be exercised to select a substance free from medical properties, having no chemical incompatibility with the medicinal agent, and of suitable physical character. Bread crumbs often make a good basis for pills, but with Nitrate of Silver they are chemically incompatible, on account of the chlorides in them.

When writing a prescription, the utmost care should be taken to use such excipients that the combination should not only be attractive to the eye, but also as little repulsive to the palate as may be. Whenever possible, the pill-form should be employed with bitter or disagreeable medicines. The pill may be readily coated with silver-foil; tonic pills may be coated with Iron by shaking or rolling them in Ferri Pulvis while soft and sticky. Sugar-coated pills and "compressed pills" are apt to get so hard and insoluble that their use requires caution. In regard to mixtures, flavoring oils should be freely used, and the power of Glycerin to conceal the disagreeable taste of many substances should be remembered. (*Wood's Therapeutics, 11th edition, page 68, et seq.*)

METRIC PRESCRIPTIONS.

Metric prescriptions are written or compounded with sufficient accuracy by considering a *Milligramme* as equal to the $\frac{1}{63\frac{1}{2}}$ th of a Troy grain, a *Gramme* as equivalent to 15 Troy grains, and a *Cubic Centimeter* (fluid gramme, millileter) as equal to 15 minims or $\frac{1}{4}$ th of a fluidrachm. All other metric terms, units and prefixes may be wholly ignored by the physician and the pharmacist. In fact the terms *centigramme* and *decigramme* are rarely used at all, the former being generally expressed by 10 milligrammes and the latter by 100 milligrammes. The term *gramme* when abbreviated is printed and written *Gm.*, the term *milligramme*, *Mg.*, and the term *cubic centimeter*, *Cc.*; always beginning with a capital. In expressing quantities by metric weight or measure in writing the common or Arabic numerals are used, and are always placed *before* the term or abbreviation designating the unit, thus—2.50 Gm., 30 Cc. When apothecaries' weight is employed the numerals are placed *after* the sign or symbol designating the unit, and in Roman characters, thus—gr. x, ℥ij, ℥jss, ℥vj, always using a small g in gr. The decimal point after the figure representing

the number of grammes or cubic centimeters should be replaced by a line, in order to avoid such errors as might arise from the misplacement of a point, the dropping of ink, or the intrusion of a fly-speck, which might cause serious results in many cases. The simplest rule for writing a prescription in metric terms by one who is not practiced in the use of the system, is the following,—

Write as though prescribing but one dose of each ingredient in grains or minims and decimals thereof; then substitute the term *grammes* or *cubic centimeters* for grains or minims, and the prescription is *correct for 15 doses in metric terms*.

Of course, when writing for a mixture or solution, the proper quantity of vehicle must be added to complete the one dose, and must also be expressed first in grains or minims. For example,—

	One dose.	15 doses metric.
R̄. Quininæ Sulphatis.....	gr. j.	1
Strychninæ Sulph.....	gr. $\frac{1}{4}$ or 0.016	0.16
Fluidextr. Glycyrrhizæ.....	℥iv.	4
Syrupi.....	℥lx.	60

This gives a two-ounce mixture approximately, of which the dose would be a teaspoonful.

	One dose.	15 doses metric.
R̄. Quininæ Sulphatis.....	gr. j.	1
Massæ Ferri Carb.....	gr. ij.	2
Extr. Nucis Vomica.....	gr. $\frac{1}{4}$ or 0.25	25

Ft. pil. no. xv. Sig.—One pill thrice daily after meals.

The above rule will answer for all liquids except those which are very heavy, as Syrups and Chloroform, or very light, as Ether. Measures may be entirely discarded, and all fluid quantities expressed in grammes. The average drop of water may be considered equivalent to 0.05 cubic-centimeter (50 milligrammes), the average teaspoonful to 5 Cc., the tablespoonful to 20 Cc., the Troy $\frac{3}{3}$ to 30 grammes, the fluidounce to 30 Cc., and 8 fluidounces to 250 Cc.

In prescribing Syrups or Chloroform, each Troy fluidounce should be reckoned at something more than 30 grammes—say 40; and if this be done, the difficulty of converting one scale into the other will be obviated. The following table shows the actual weight in grammes of one or more fluidounces of the substances named:—

Fluid oz.	Water. (Grammes.)	Tinctures. (Grammes.)	Syrup. (Grammes.)	Chloroform. (Grammes.)	Ether. (Grammes.)
℥i.	= 29.52	28.00	38.00	43.70	22.14
℥ii.	= 59.04	56.00	76.00	84.40	44.28
℥iv.	= 118.08	112.00	152.00	174.80	88.56
℥viii.	= 236.16	224.00	304.00	349.60	177.12

Tables of equivalents between apothecaries' and metric weights and measures will be found in the Appendix, and on the inside of the cover of this book.

ABBREVIATIONS.

Abbreviations, though very commonly used by physicians in prescribing, are a source of much annoyance to the compounder, and frequently one of great

danger to the patient. Physicians who never knew anything of the Latin grammar, or those who have forgotten its rules, are very apt to use abbreviations to conceal their ignorance of case-endings. Many others use them through sheer laziness and some from force of habit. The educated and conscientious man will take pride in turning out a full and clear prescription, free from cabalistic letters and all elements of uncertainty. In the Appendix will be found a list of the Latin terms used in prescriptions, with the abbreviations in vogue and the English meanings. Ambiguous contractions may result fatally to the patient, as is readily seen by studying the following list, which gives a few examples of the dangers of careless abbreviation:—

	Acid. Hydroc.—may mean	{ Acidum Hydrochloricum. Acidum Hydrocyanicum.
Aconit.,.....	{ Aconitine. Aconitum.	Hydr.,..... { Hydrargyrum. Hydras. Hydriodas. Hydrochloridum. Hydrocyanidum.
Ammon.,.....	{ Ammonia. Ammoniacum.	
Aq. Chlor.,.....	{ Aqua Chlorig. Aqua Chloroformi.	Sod. Sulph.,..... { Sodium Sulphate. Sodium Sulphite. Sodium Sulphide.
Aq. Fontis,.....	{ Might easily be read Aqua Fortis.	
Chlor.,.....	{ Chlorine. Chloral.	Sulph.,..... { Sulphur. Sulphide. Sulphate. Sulphite.
	{ Chloroform.	
Hyd. Chlor.,.....	{ Calomel. Corrosive Sublimate.	Zinci Phos.,..... { Zinc Phosphate. Zinc Phosphide.
	{ Hydrated Chloral.	

RENEWALS OF PRESCRIPTIONS.

It would be advisable for physicians to always write the words *Non Repeatur*, or some similar direction, on all prescriptions which should not be repeated without their sanction. By so doing they would doubtless cut off a good many renewal charges from the receipts of druggists who might fear the legal consequences of disobeying the mandate. This inconvenience to the drug-seller would be more than compensated for in the advantage resulting to the drug-taker, who too frequently carries in his pocket-book a stock of receipts for his various complaints; and in protection to the physician, who by giving up the dispensing of his own medicines has placed it in the power of the druggist to connive at direct robbery of the just reward of professional skill and knowledge.

It is doubtless a fact familiar to every observer, that the old-time confidential relations between the professions of physician and pharmacist have almost passed into oblivion. In fact, the tendency of pharmacy now-a-days is towards the position of a mere money-making trade, instead of in the exalted direction of a profession. The indiscriminate renewing of prescriptions, the open sale of quack nostrums and homeopathic pellets, the readiness with which counter-prescribing is indulged in, the insinuations too frequently made over the drug-counter in reflection on physicians, and many other similar practices, have caused the non-combatant profession to regard the average druggist with suspicion. If physicians boldly took the dispensing of medicines more into their

own hands many of these evils would soon eliminate themselves from the drug-stores. Right here it may be said that there is nothing unprofessional or derogatory in the dispensing of his own medicines by the physician. In England it has been the universal practice for centuries in all places except the largest cities, and it has been given up by a part of the medical profession only as a matter of convenience to themselves, not as a right belonging to the pharmacist. The homeopaths fought for the reclamation of this practice as a right belonging to the medical profession, and succeeded in securing its legality, but not from a worthy motive. They dispense their own medicines in order to cover up the fraudulent practices of which they are often guilty, and to give them the power of administering full doses of powerful drugs in a form which is apparently "homeopathic," with no tell-tale prescription on file in a drug-store to give mute but dangerous evidence against their honesty. In this way they administer several grains of calomel or eighth-grain doses of morphine, or correspondingly large quantities of active alkaloids, triturated with sugar of milk, or dissolved as many of the latter may be in alcohol. Chemistry, by isolating the active principles of plants, and furnishing them to commerce in the form of soluble salts, has enabled the homeopath to practice this fraudulent method of dispensing drugs, which the innocent and ignorant patient, who believes in the power of the minimum dose, supposes to be infinitesimal in amount. But the physician of the regular profession is too apt to think that if he uses a practice which charlatans have appropriated to themselves, he may be classed with them by his professional competitors. Hence, many regular physicians are absolutely afraid to use such drugs as Aconite, Belladonna, Gelsemium, and Arnica, all of which are official, and older in medicine than homeopathy; and avoid pocket-cases, drachm-vials and triturations, as badges of charlatanism. It is high time that we asserted our independence in all these matters, and made use freely of those means which are recommended by our individual judgments as promotive of the best results to our patients and to ourselves. With a small stock of reliable fluidextracts, and an equally moderate supply of gelatin-coated pills and compressed tablet-triturates from the best houses, physicians could checkmate the unscrupulous practices of many druggists to a great extent, save their patients many dollars, and retain many a dollar for their own pockets which under the present system goes to their enemies. The homeopaths understand the money part of the argument well. When their patients' medicine is exhausted, the doctor must be seen for a fresh supply, meaning of course another consultation about symptoms, a change perhaps from *Mercurius Dulcis* to *Mercurius Vivus*, and another fee. The expense is nothing, sugar of milk being cheap, and there is no prescription in the patient's pocket-book, to be renewed scores of times (paying toll however every time to the druggist), and finally to be copied by aunts, mothers, and friends, as a "sovereign remedy" for a cough, or a "really wonderful receipt" for a case of croup.

PRESCRIPTION BLANKS.

After many years' experience in prescribing on blanks furnished by druggists, the writer has come to the conclusion that it is much better, for many reasons, for the physician to have his own blanks, without the address of any drug-store thereon. These blanks should be furnished with stubs on which to write the prescription at first in rough, afterwards copying it out cleanly on the main blank. A careful prescriber always writes a formula twice before letting it go out of his hands. If he does the first writing on the stub of a book of blanks he will always have a copy of the prescription in his possession, for which he may afterwards be thankful. The blank used by the writer measures $4\frac{1}{4}$ inches by $3\frac{1}{4}$, joined by a perforated edge to a stub $3\frac{1}{4}$ inches by $2\frac{1}{2}$ inches. On the main blank the physician's name and address are printed, together with his office-hours, and a place for number and date, also the sign R., and a line for signature. On the stub are printed the words, "Copy of Prescription No.....For....."

These blanks are bound up in books of 100 each, with a flexible morocco cover, from which the book of stubs may be slipped and a fresh book inserted as required. The size is ample for all ordinary requirements, and permits of the book being carried in the breast-pocket.

INCOMPATIBILITY.

Incompatibility may be Chemical, Pharmaceutical or Therapeutical, according as the prescribed combination results in chemical decomposition, physical disassociation or antagonistic action. In the first case the incompatibility may be unintentional or intentional on the part of the prescriber, for in many cases the result of the chemical action affords the substance desired.

Instances of intentional incompatibility are the mixtures of Calomel or Corrosive Sublimite with Limewater, producing the Black and Yellow Oxides of Mercury respectively and commonly known as *Black Wash* and *Yellow Wash*. Such a combination should not be filtered (as a novice might suppose), but should be dispensed with a Shake-label, in order that the precipitate may be uniformly distributed before using.

Chemical Incompatibility generally results from neglect on the part of the prescriber of the most common chemical reactions, such as that—

Acids tend to combine with bases and to form salts.

Weak acids or bases are displaced from their combinations by stronger ones,