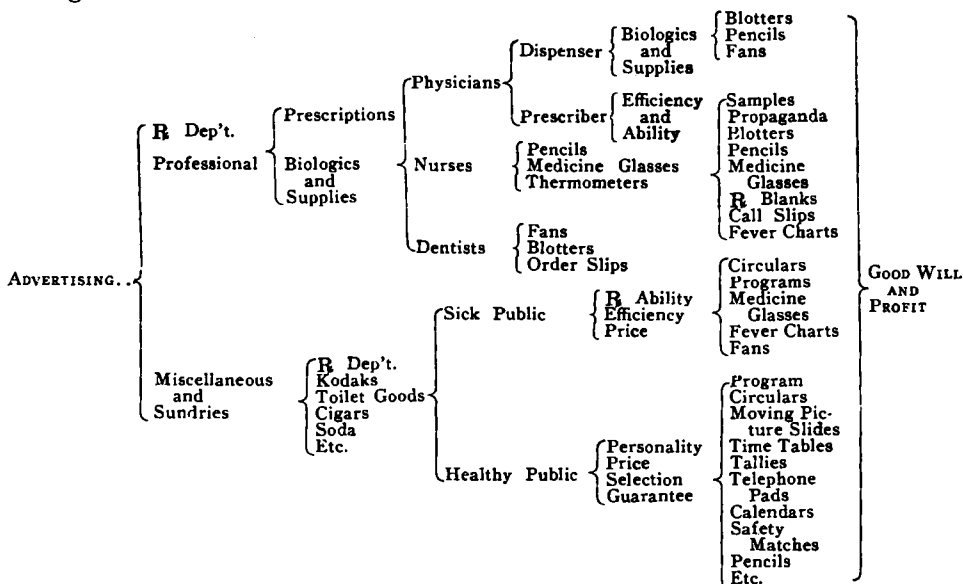


This chart gives you an outline of what to advertise, to whom to advertise, and through what channel.



In conclusion I would say that these things take time and nursing. You must not look for large returns immediately, but if patiently followed out the remuneration will be worth your while. The longer you follow up advertising the less you will seem to know about it, because things and methods change so rapidly with the introduction of newer and novel ideas. But the game is fascinating and the longer you work the more you will like the work. It may appear deep and intricate at first, but it really is very simple. Master the fundamental rules and you will be as proficient as anybody. My advice is to start now.

“CONSERVATION IN RELATION TO PHARMACEUTICAL CHEMISTRY.”*

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The conservation question has been before the public to such a large extent during the past few years that in some ways I hesitate to make any remarks on what might be considered a hackneyed subject; but it has an important relation to our particular branch of science, and economic conditions at the present time certainly demand conservation in this field, so it seems important enough to give the subject some slight consideration.

It would not be possible in a few paragraphs to consider the application of this subject to all of the different branches of pharmaceutical chemistry, and I am only going to touch on four of the important points which have come to my

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special attention during the past few years, and especially during the two years that I have been connected with the economic side of the work.

The four points that I want to talk about are those relating, first, to the manufacturer; second, to the retail druggist; third, to official control; and fourth, to fakes.

A sort time ago there was placed on my desk a package of considerable bulk which, on opening, I found to consist of 142 monographs, mostly reprints of magazine articles but all the work of a number of scientists connected with one particular laboratory and all relating to pharmaceutical chemistry in its highest scientific sense. They were all articles on research problems, and in most cases went to the very root of the question under consideration. The laboratory which was responsible for this work is under the protection of the British Empire, and the firm itself is a manufacturing house which has had wonderful success in its business and is now invading the American market to a degree which is appalling. This mass of research matter gave me considerable food for reflection, and I sat down and looked over the indices of some of the abstract journals to see what we in America had contributed, in a scientific way, to pharmaceutical chemistry during the same period. While in the whole we have done a good deal, with the exception of the work done by our own Bureau of Chemistry here in Washington and by the American Medical Association in Chicago, very little of what might be called real scientific research has been done by the profession at large. We all know that some of the larger manufacturing houses do maintain laboratories which, they claim, are devoted to experimental work and, supposedly, to advance research. In one case I know that such a laboratory has been run for at least a decade and that the picture of the building is used for advertising purposes. However, the amount of real valuable work that has been turned out by this laboratory, at least so far as has been made available to the science at large, would occupy but a few inches of index space during all that period.

It is not my purpose to intimate that the entire success of this foreign firm is due to research, but it is very evident from a study of their products and from the fact that their value has been positively ascertained, both by practical and chemical investigation, that at least part of their success is due to their ability to get at the bottom of things. The American manufacturer has certainly wasted a great deal of time and energy in making up products whose chemical and therapeutic value were uncertain, and in many instances absolutely unknown, and has relied on the medical profession to get results from which he could make advertising. We have this forcibly brought to our attention by the vast number of digestive products that have been exploited and which, on investigation, are found to be either inert or of so little therapeutic value as to be unworthy of consideration by the medical profession or by the laity, who actually consume them. We have seen how manufacturers would put out preparations claiming to possess the virtues of cod liver oil and extol the value of the alkaloids present in the original material, when, as a matter of fact, we know that the true value of cod liver oil has nothing to do with the alkaloids; and these substances are indicative of putrefaction in the livers before expression and are really a sign of impurity. They are ordinary, common amines which can be made from any liver—dog, cat, or most any refuse from the slaughter houses. We see hundreds

of preparations on the market, with fancy names, which are made up of products containing so-called resinous principles with unknown glucosides which, if investigated—as was done by the firm above mentioned—would be shown to consist of nothing extraordinary and probably nothing of any value. It can safely be stated that as soon as the manufacturers fully wake up to the idea of careful research, it will be possible to write a very interesting mythology in pharmaceutical chemistry and to relegate hundreds of products of supposed value, to the waste heap, and it will be possible for these same manufacturers to save their shelves and the shelves of the retail druggist from an immense accumulation of worthless material.

The point I wish to make is that the manufacturers could well determine the actual value of their products from a chemical and an unbiased therapeutic standpoint before they put them on the market, thereby saving themselves great expense in maintaining a supply of useless crude material, in making up valueless pharmaceutical products and overlooking space which might be used to good advantage with meritorious articles.

Some of our manufacturers, especially those who have not been in a position to retain on their staff a fully qualified pharmaceutical chemist, are taking steps to have their manufacturing processes examined, criticised and improvements suggested; and what is of special merit, also are learning how to analyze their products so that when they claim on the label that it contains a definite quantity of a certain ingredient, regardless or not as to whether it is an inhibited drug, the amount that they claim on the label will actually be found there. It is well known that methods of assaying complex mixtures are very few and many of them can be worked out only after a considerable amount of experimentation, but with time and thought there are probably only a few such problems which could not be solved. A full realization of this question would have saved hundreds of manufacturers from prosecution under state and national and local drug laws, and at the same time have saved them untold expense.

The American Medical Association, though it has been greatly criticised by some of the manufacturers, has done an immense amount of very meritorious work, and it is to be hoped that in their laboratory, in Chicago, they will continue to carry out their present policy. The American manufacturer or associations of manufacturers could do nothing more to their advantage than to thoroughly cooperate with the work that is being done in the laboratory of the American Medical Association; not necessarily to adopt their suggestions, but to check up their work and to adopt it where it is shown that the American Medical Association is right in their conclusions as to the value of a particular preparation and to show wherein they may be wrong in case the manufacturers' laboratory obtains different results. By this means, progress looking to the final evolution of meritorious and perfect-keeping products, would be much more rapid.

Coming to the retail druggist, there are two points which I think ought to be emphasized in the beginning and which, I believe, will be agreed to by all of us present. In the first place, the retail druggist is not primarily a storekeeper or simply a vendor of supplies. His place in the world of pharmacy can be obtained only by a scientific study, and he is not allowed to enter into his profession until he has passed certain examinations and fulfilled certain requirements satisfactory

to the community wherein he desires to establish himself. This should make him vitally interested in what he sells, both as regards the efficiency of the same as a medicine and as to its keeping qualities and activity as a drug. Also, on account of the vast amount of legislation which is going on at the present time, he is obliged to keep up, to a greater or less extent, in analytical chemistry.

The retail druggist is obliged to stock his shelves with a great variety of substances, preparations and mixtures, and in some stores this supply will probably reach into the thousands. These things come to him from manufacturing pharmacists, patent medicine makers, manufacturing chemists pure and simple, and those who deal in specialties—to say nothing of the numerous preparations which are not strictly drugs or medicines. Oftentimes the druggist has to invest a relatively large outlay in some one thing for which he has but few calls, and sometimes these calls only come at the interval when a manufacturer is carrying on a detail in that vicinity. He also is obliged to stock his shelves with a vast amount of material which is absolutely useless; some of the things being of high cost. At the present time there is a great run on peroxide creams, antiseptic soaps, throat lozenges claiming to have active formaldehyde, and others. A great majority of these things are absolutely useless. There is no peroxide cream made which contains any detectable peroxide; and the value of antiseptic soaps is mostly in the label and not in the body of the substance in question. However, the druggist is obliged to carry all these articles and many others of analogous properties, and hence he becomes merely a storekeeper.

It seems as if the American Pharmaceutical Association could do the trade a great deal of good by establishing a central laboratory, where products could be carefully checked up, and, where they are of no value or of doubtful value, a full exposure could be made and sent to all the members of the Association so that they need not stock their shelves with these useless articles. Furthermore, this laboratory would be in a position to advise its members as to the true relative merits of the lines carried by the different manufacturers, and thereby enable the druggist to talk intelligently to the physicians who are his patrons, as well as to the lay patron. Again, such an institution would have an opportunity to work out methods of analysis which are of special importance to the retail druggist—simple methods, if possible, whereby he could quickly check up some of the things he makes, such as tincture of iodine, spirit of camphor, paregoric, etc.—all of which must contain a definite quantity of the active ingredient and which, if wrong, are likely to subject him to unpleasant prosecution and notoriety.

The retail druggists ought to spend some time in studying the question of cost, and, wherever possible, suggest to manufacturers the conservation of raw materials in order that the substances which they use to a considerable extent can be obtained at a better price. For instance, probably not one retail druggist in a thousand knows that the chocolate manufacturers in this country have for years thrown away by-products which contain valuable ingredients amounting to from fifty to one hundred and fifty dollars a ton; ingredients which are used to a great extent by the members of this profession and which would probably have a larger use if they could be obtained at a more reasonable figure.

Again, the woolen manufacturers have for years thrown into the rivers, or sold something little better than sludge for leather makers, a grease which can be

worked up into the finest grades of lanolin, equalling and surpassing in quality that which is imported from Europe. A laboratory such as I have mentioned above would be in a position to take up such questions and impress upon the manufacturer the advisability of working up these goods for the American market.

There are many other points which such an institution could do to assist the retailer and which would undoubtedly make the Association a much stronger body than it is at present, by bringing in a larger membership. But I have not time at the present moment to go into all the features.

Coming now to conservation in connection with official control, I want to say a few words regarding the matter of rules, regulations and laws which are being enacted and which affect our particular work.

The Food & Drugs Act has proven to be one of the most interesting and valuable pieces of legislation that has been enacted in this country for a long time, and it is being copied to a large extent by the different states. As a whole, it has worked quite well; and certain features which have allowed technical violations, have been corrected or an attempt is being made to correct them. Before advocating new legislation or radically modifying this law or any other, those who have the matter in charge ought to be absolutely certain that the results sought can be obtained and are really going to be of benefit. I say this because, as it is now, the people who are engaged in the selling of pharmaceutical products come in contact with national, state and local laws; and a study of the requirements in vogue at any particular time is quite a problem, in order that goods may be honestly labeled, and the uncertainties of new legislation and the consequent changing of labeling, if anything new is enacted, requires constant alertness at great additional expense. Now, it is well known that the final burden of all these added expenses comes on the ultimate consumer, and the vast amount of legislation that has been enacted and enforced during recent years has been a great factor in the increased cost of living, both in relation to foods and medicines. I think it can be said truthfully that if the Federal Food & Drugs Act were strictly interpreted and enforced in the District of Columbia, it would drive every small retailer out of business within five years. This may seem a radical statement, but, with his multifarious stock he cannot keep it always up to standard, and if rigidly inspected it would not be long before he would be caught twice for the same offense which, as we know, carries a jail sentence, and even though the man may have been perfectly honest in his desire to keep his products up to standard, we know what the experience has been in the past. The courts pay very little attention to this in many cases. It seems as if control officials should endeavor to help instead of to persecute the retailer. Those who are doing an underhand business will soon be discovered and the energy of enforcement can be visited on them and the honest dealer made to feel that he can conduct his business without constant fear of prosecution.

Going back to the Food and Drugs Act, a short time ago an attempt was made to enact an amendment requiring the declaration of about every individual drug in the Pharmacopœia. There may have been some reasons for this, but before such legislation is enacted or attempted, its real necessity ought to be ascertained. It would appear to me from a study of this particular feature of drug legislation, that we require the declaration of too many drugs now. The primary object of

this declaration is to let people know what they are getting and to let them know if they are buying an habit-producing drug. Every one knows about opium, cocaine, and chloroform; and a large majority probably know something about acetanilide, but probably not one in one thousand ever heard of eucaïne, and alpha eucain is not sold in the United States. Probably not one laymen in five thousand every heard of cannabis indica, and it is doubtful if the Hashish habit will ever be in vogue in this country. However, if there is danger of such a contingency, to be consistent we should make provision for the chewing of areca nuts and the eating of mescale buttons. Furthermore, cannabis indica cannot be determined, and the declaration of it is of small value because the amount stated cannot be checked. Alcohol in medicine is not taken for its medicinal effect. If one wanted alcohol for this purpose he would buy whiskey, or some of the straight grain alcohol. "Medicated boozes" can no longer be sold except under a revenue license, which brings them into the same class as whiskey, and under the category of beverages on which no declaration is necessary. Personally, I cannot see the logic or the necessity requiring a declaration of alcohol, and such declaration requires a vast waste of time, energy and material all over the country in assaying the batches of products containing it. Hence, the burden of declaring a lot of other things on labels, the checking up of the analysis and other useless procedures connected therewith, ought not to be imposed on the members of our profession.

At the last meeting I listened to a discussion regarding the declaration of sales of coca and cocaine, required by the Treasury Department. It was apparent that the most of the members present thought that such a declaration carried the goods down to the ultimate consumer, or practically to that end. I think, myself, that the matter was taken too seriously and that it will not be taken seriously by the trade as a whole, for, to check up such a proceeding would require nearly as much work as checking up the returns under the income tax; and as there is no appropriation for carrying it out and no penalty attached for not complying with it, and as there is not room in the Bureau of Chemistry for a force of clerks to check up and interpret the returns from the thousands and thousands of retail druggists, doctors and other people who handle from a grain to 2 or 3 ounces of coca leaves a year, it seems more like a tempest in a tea-pot. However, such a regulation comes under the present discussion because it adds one more piece of work to the already over-burdened druggist and dealer, who is beset with much unnecessary regulation already. If such regulations and orders become obnoxious, it is but a simple matter to remedy them, and the course is open to anyone affected, though many may hesitate to take such steps. Nothing should be construed in the statements which have just been made, which would appear to be antagonistic to well merited legislation, but it seems from a study of what we have at the present time, that we could dispense with a good deal of what we have now.

Before closing I want to say one or two words on the subject of fakes, and suggest what could be done by the pharmaceutical chemist to do away with this evil. The American Medical Association, and, spasmodically, some of the Journals, have exposed a number of fake products which have been foisted on the American public to the extent of many millions of dollars. The work done by

the American Medical Association, unfortunately, does not reach the public generally, except occasionally through some magazine article—and it is only through publicity, and continued publicity, that the sale of these pernicious things can be stopped. The retail druggist himself is not in a position to do this, because he immediately is sued for libel and is not able to defend his case in court. It was thought that the Food and Drugs Act would eliminate this problem to a considerable extent, and it undoubtedly has, but from the number of pernicious and weird things that have come to me for analysis during the past year or two, it would seem that this law is not able to reach all cases. For instance, we have here an article which is sold at the philanthropic price of \$25.00 to anyone who wants to prolong his life. It consists of a brass capsule, nickel-plated, filled with red oxide of iron and plaster of Paris, and which is connected with a wire to a plate which is attached to the ankle. The nickel-plated capsule is put in some water—ice water recommended—and the manifestations begin. Sometimes the philanthropic doctor who puts this out, sends a quart of tonic, at the very low price of one dollar, which seems to be a weak pickling liquor from the iron works or something of a very similar nature. Another interesting fraud is this little tablet which is advertised in the highest terms as being valuable for anybody, whether he is sick or well, and which is found, on examination, to consist of sodium tartrate and epsom salts. Another product which is apparently unique, is this liquid. It is recommended as an eye remedy, and is exploited for producing shinary eyes, especially among actresses. On examination it was found to be an essence of pepsin, and the scheme is somewhat unique, though in a way there is a basis for it, as we all know that a bad stomach makes a dull eye. Turning now to some articles for external use, I want to mention this hair remover, which, though not a depilatory, is especially recommended for women. This product seemed to be a paste which is to be warmed, spread on the face, and after cooling and drying, to be removed, taking with it the hair. Investigation proved it to be common rosin, with possibly a little added balsam or something to give it an odor, which, on application, was found to have marked sticking properties. It would unquestionably pull out the hair, but at the same time probably considerable of the epidermis. Another interesting fake which you may all try if you wish, is this wrinkle eradicator, which is sold at a very high price and which can be cut into various shapes and guarantees to do the trick with old and young. As you will note, it is nothing but an ordinary court plaster, sold at an exorbitant figure. It seems to me that all the organizations, manufacturers, retailers, wholesalers and medical bodies should resolve together to stamp out this abuse, and I believe if they would work in unison there certainly would be no fear of prosecution and they could accomplish results which would be beneficial to all. The Drug Trades Conference might consider this suggestion.