

PETROLEUM WHITE OILS.*

BY DR. R. E. HUMPHREYS.

For many years white paraffin oil has been employed with the endorsement of physicians for the treatment of constipation and other intestinal troubles. It is a somewhat viscous liquid that is not at all changed chemically by the intestinal secretions nor absorbed from the alimentary tract. So far as is known, it can be given in very large doses without any bad effect. In the intestinal tract it acts as a lubricant and protective agent; is not at all affected by the processes of digestion; its lubricating action is without irritation, and there is no artificial peristaltic activity, such as is caused by laxative and cathartic drugs. It assists in bringing about bowel evacuation solely because of its action as a lubricant. In the upper intestinal tract the oil becomes mixed with the food and waste products of digestion, so that ultimately the fæces are softened, the entire tract is lubricated, and the expulsion of the fæcal mass is brought about more promptly and with greater ease. It is very probable that it also exerts in the bowel a disinfectant action on some of the strains of fæcal bacteria.

These white oils have hitherto been manufactured almost exclusively from distillates of Russian crude petroleum. For a good many years their consumption in this country was very limited, owing to the fact that their therapeutic value was not generally recognized. For this reason, and because their production involved complicated and expensive processes under the control of Russian manufacturers, American refiners produced no white oil until the present war cut off the supply. In the meantime the demand had grown so amazingly that our refiners felt justified in making an effort to produce the oil from the crudes found in Pennsylvania, Mid-continent, and California fields. There is no reason why such oils manufactured from American crudes should not be the equal of, or even better than, those having their origin in the Russian crude. The paraffin crude oils are as amenable to treatment as the Russian. The latter are composed chiefly of naphthene hydrocarbons, and the naphthenes are not quite so stable as the paraffins. They stand between the paraffins and the olefins.

The method of treatment of the distillates from crude oils of whatever origin consists in the complete removal of all unsaturated hydrocarbons and sulphur and other derivatives. The means by which these things are brought about vary with each manufacturer, and there have been a number of processes patented both in this country and abroad. One American manufacturer has secured the Russian patented processes and is using them with great success on American crudes. The resultant oils should be colorless, tasteless, odorless, free from fluorescence, acids, alkalies, sulphur compounds, and other deleterious substances.

Occupying the field to the complete exclusion of white oils made from crudes of a different composition, the Russian oils became standard, as it were; and the tests tabulated in the British and United States Pharmacopœias, and the specifications made by the dealers were based upon the tests and the properties of the Russian white oils. It came to be believed that the oils should be as viscous as castor oil and that they should have a high specific gravity; but it has been thoroughly demonstrated that the product of American manufacture having a medium viscosity and a specific gravity of 0.85 to 0.86 is just as effective as, and even

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more palatable than, the Russian oils. The specific gravity of products from Russian petroleum is naturally higher than from American, because of the difference in chemical composition. But there can be no therapeutic significance in a difference of specific gravity. When the oil is very viscous it not only clings an objectionable time to the tongue and throat but does not so effectively permeate the fæces. The thinner oil disappears quickly from the mouth and is taken very readily by children and the sick.

Certain tests have been made to determine the purity of these oils. One, called the "mixed acid test," is made by mixing equal quantities of nitric and sulphuric acids and shaking two volumes of the mixture with one volume of the oil. If a deeper than canary color results the oil is judged not to be pure. Such a mixture of acids as the above will act upon all petroleum hydrocarbons, even those of the paraffin series. If the strength of the acids and all conditions of making the test are not carefully stated and the test made by a competent chemist, the results will not be useful. The activity of the acids is entirely too drastic. The action of ultra-violet light has also been proposed as a test. This is also too drastic, as exposure to these rays affects all petroleum hydrocarbons. The manufacturing processes necessary to make an oil that is colorless, odorless, tasteless, and free from fluorescence insures the removal of all harmful substances.

Very excellent American oil, in volume equivalent to several million pint bottles, has been marketed during 1915 with completely satisfactory results to the purchasers. There would seem to be no reason why American oil should not forever displace the Russian product. Those who are entrusted with the making of specifications for white oils should remember that the specifications of the pharmacopœias are based on Russian oils. Because Russian oils, only, occupied the field in the beginning, and because it was presumed that such oils could not be manufactured from any other crudes, our developing American industry in this particular field should not be saddled with antiquated specifications in regard to specific gravity and viscosity, but should be given every opportunity to supply its own field on the basis of specifications adapted to American crudes.

THE DEVELOPMENT OF SCIENTIFIC MEDICINE.

An investigation of medical history shows two developmental periods which interlace with each other to some extent. In the early days our ideas of disease and its treatment were quite indefinite and general and were founded, in the main, on hypotheses and theories which had no particular scientific basis. In later years, research and experimentation have furnished the scientific basis for the establishment of various facts and for certain seemingly sound theories in addition. It is true, some of the theories brought forth have been illogical deductions from the facts at hand, others have been formulated as a result of false evidence, improper technic, etc. It is fair to say, however, that medical theories propounded as the result of scientific research are much safer than those originating in the inner recesses of a dreaming mind. It can be said, therefore, that the earlier periods of generalization in medicine have passed, and we are now working in the age when legitimate progress can be made only as a result of careful research and experimentation.—E. F. McCampbell, *Ohio Public Health Journal*.

GREATER COMMUNITY SPIRIT.*

The Baltimore Industrial Survey Report, on page 10, stated that effort may profitably be expended in improving the local demand for local products; that Baltimore manufacturers are supplying but a small part of our home consumption, and that there is a wide gap between local producers and local consumers, tending to produce a feeling of chronic apathy toward local manufacturing enterprises, resulting in discouragement of existing establishments and in neglect of new enterprises. The various trades and civic bodies of Baltimore may very properly individually and in co-operation undertake the work of establishing closer business relations between the manufacturers and merchants of the city, to the end that local effort should receive proper encouragement and stimulation.

By reference to page 53, etc., of the Industrial Survey Report, we find that in general the retail merchants as a class are not reliably informed with respect to, or conversant with, the local industries manufacturing the wares traded in respectively by them, to venture a statement of sufficient weight to merit more than casual consideration.

Coming to the drug business, the report of the Industrial Survey shows that in this particular line there is not so much necessity for special effort to promote a demand for locally-made goods as in many other lines, but I feel that it is most important that the members of these associations be made aware of the conditions as I have outlined them, and exert themselves whenever opportunity offers to promote consumption of home-made goods.

I am convinced that there is more to be considered, and that, taking the drug business as an example of all the classes of retail merchants, much can be accomplished in making retail business more profitable, and hence in promoting the best interests of our city. I have talked with several young druggists just entering the business, and, in response to my question as to their plan for building up a business, have been surprised to note the general dependence on price-cutting for this purpose. I have talked with those who I believe are in a position to know the facts, and am informed that the drug business is not to-day as profitable as it was a few years ago. I have heard on the street comments with regard to price-cutting on the part of the down-town druggists, and the opinion seems to be that there has been a price-cutting war, and that it has progressed so far as to have reached disastrous proportions. For example, I have been told that witch hazel, which, according to the U. S. Pharmacopœia, means 15 percent alcohol, sells regularly at twenty-three cents a pint, and one druggist in this room is selling it at twenty-five cents; the recognized special price has been fifteen cents. Witch hazel, so called, has been sold in Baltimore recently as low as seven and eight cents a pint, but not labelled with the quality. This condition seems to have progressed so far that druggists have to advertise "None sold to dealers." This is evidently a case of druggists living off of each other, instead of off the buying public. This degrades the price, degrades the standard, and undermines confidence. The whole practice of medicine is based on confidence. Half of the relief of the patient is confidence. Would it not be better to exert one's efforts in support of the service

* At the meeting of the Baltimore Retail Druggists' Association and the Local Branch of the American Pharmaceutical Association, held December 13, Mr. Douglass Burnett delivered an address on the subject of a "Greater Community Spirit," from which this article is abstracted.

rendered by the drug store? Would it not be better if advertisements exploited quality and service? Would it not be better to add a bit to the price figure, if anything, than to make a cut? Is it not possible to maintain the price on stable articles, and to advertise special sales on self-made preparations? Can we not be round-figure men?

Mr. Aldred once told a story of a man in the shoe business in New England who had occasion to go to London and open a shoe store. He had determined upon his selling price of shoes at so many shillings, but found that the English people were accustomed to deal always in shillings and pence. His American spirit tempted him to make his price at, say, twenty shillings and no pence, always stating the "no pence." On second thought he felt he might just as well make it six pence, and the result was that all of his prices were so many shillings and six pence. When he had been in business a certain length of time he found that the six pence which had been casually added as a store policy was the one thing that created just the difference between profit and loss.

Of vital importance to the success of any business enterprise, no matter how small or how large, is the question of education along our specific business lines, and then of mutual helpfulness. I think that these two subjects properly worked together will prove effectual remedies for many business troubles.

This educational effort is of direct benefit to the industry in many ways, but in no one way more particularly than in identifying the men permanently with the employers for whom they are now working. How much better is it to have our help satisfied and contented in their work than to have them discontented and continually leaving our employ, opening up competitive stores, price-cutting and demoralizing the business!

There are men here to-night whom I know to have as partners young men who were formerly their clerks.

But it is not only a question of educating the young men—it is one of self-education. I venture to say that in this Association there are comparatively few men who have finished their education on the subject of necessary store accounting. For instance, how many druggists make it a practice to analyze the accounts at sufficient and regular intervals to enable us to know that all of our legitimate expenses are being met out of the business, including the value of the time that we, as owners of our stores, are putting in the business, including the interest charges on the capital that we have invested; that we have in the selling price a sufficient allowance for overhead charges; that such and such a figure is or is not a proper allowance for overhead, and that we are obtaining a surplus of so many percent? Do we make it a practice to mark our goods accordingly with a sufficient margin to accomplish these things? You may say, why the surplus? And the answer is, for the purpose of these improvements that have been talked about. How can a store continue to grow and be successful in its business unless it has means of financing the improvements, such as the white paint that Mr. Lyons has spoken of; the improved show-window displays, the lighting of the store and windows that are such helpful aids to business, and the erection of such show-windows as Mr. Lyons suggested for the Mount Royal Avenue side of that prominent drug store.

There is room for many constructive efforts in every retail business. I would say to the Druggists' Association of Baltimore that, no matter how many or how few committees you may have, or how active or how dormant they may be, you have room for more educational effort to develop the spirit of mutual helpfulness. You have room for more work on the part of a co-operative committee. I would

conceive the work of the co-operative committee to be, to supervise and suggest the operations of stores that need help in manifest lines, as, for instance, in the way of improvement in the show-windows, lighting, etc.; to work with The Advertising Club of Baltimore and the Merchants and Manufacturers' Association and other trade organizations in studying the needs of the business; to act as counsellor and guide to those who are disposed to wrong practices, such as price-cutting; and to act in conjunction with the Credit Men's Association to improve the character of business risks in the trade.

I wish I had time to read you an article that appeared in The New York Times of December 5. The Wholesale Men's Furnishing Association found that too many men were failing to discount their bills, and that there were too many receiverships and cases of retail businesses being conducted unprofitably. They formed an Advisory and Adjustment Committee, meeting every Tuesday, and made arrangements for all cases of slow-pay accounts to be reported by the retail merchants, and they have found many cases in which helpful suggestions have resulted in putting the business on a paying basis, so that the merchants could discount their bills and obtain loans from the banks, where otherwise that would be impossible. I am quite sure that a committee of "business doctors" for the drug business who would seriously consider this situation and put active plans in force would be of benefit to the business.

I would like to suggest that your Association offer prizes for the best suggestions for show-window displays, these prizes being open to all of the employees of the Retail Druggists' Association, and that prizes be offered for suggestions of best methods of promoting the business.

I am quite sure that, if your Association will go about these matters constructively and seriously with the object of promoting a better community spirit and a greater active co-operation on the part of the members of the Association, they will not regret the time and trouble spent in the work.

WASTEFUL SAVING.

Modern efficiency methods have upset many old notions about thrift. Time is the one thing that cannot be replaced or regained: the minutes lost are gone forever. A letter in a morning paper illustrates the point. The writer indulges in self-praise because he hunted for a cent he dropped on a subway platform. A companion urged him to let it go and catch the train. He detained his friend, both missed the train, but he found the cent.

These men may have had nothing better to do than hunt for that cent, but if they were losing time that should have been devoted to work or business they were very wasteful. They must have lost five minutes at least, ten minutes of working time for both. Few men work for less than twenty cents an hour, and on that basis it cost more than three cents to find that cent. On this principle factory hands are told not to pick up a nail when they drop one. The nail costs less than the time consumed in picking it up. The old goody-goody stories, such as that of the man who always untied the knots and saved the twine instead of saving time by cutting it when unpacking goods, are out of date. Waste of time is the worst waste of all.—*New York Commercial*.