

Section on Practical Pharmacy and Dispensing

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IMPROPER CONTAINERS.

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It has come to my attention in numerous ways that many of the articles sold by the pharmacist are handled in containers not well suited to the proper keeping of the goods. This applies particularly to crude drugs, to chemicals, etc. Many instances are known where the pharmacist has had to suffer the annoyance and expense of explaining to the local Commissioner of Foods and Drugs how it happens that substandard goods are found among his wares. The pharmacist's explanation frequently is that he originally procured goods of proper quality—in fact, always tries to do so—but they sometimes deteriorate on keeping.

Of course we all know that very many of the articles found in our pharmacies do deteriorate in quality upon keeping. Much of this deterioration is at present unavoidable; but it is also true that much of it is avoidable. It is not necessary or advisable today to attempt to review all the means of lessening this avoidable deterioration. But one feature of it will be briefly discussed.

It seems almost unnecessary to say that, if one desires to have good goods, the goods should be kept in proper containers. Just here, however, lies a large part of the trouble of deterioration. Good goods are not always found in good containers. The mistake of putting goods into improper containers is not made by the pharmacist alone, nor is he alone responsible for it. The wholesale houses also are entitled to a share of the discredit; and the same is true even of the manufacturers themselves. Under present conditions, however, the pharmacist is in the best position to remedy the difficulty, and this is the reason for bringing the matter up in this place.

If any one here feels that it is impossible to obtain supplies in proper containers, I think he is mistaken. For nearly, if not quite, all goods, containers that will be desirable are at hand. They are not necessarily the most expensive containers, nor are they necessarily glass bottles. But for almost every article that usually suffers deterioration by drying out, by absorbing water, by the action of the air, by the action of light, by the action of insects, etc., there is a desirable container of some kind or other. It may be tin can, pasteboard carton, glass bottle, paper bag, wooden box, or what not—its one quality should be *suitability* for the goods it is to contain. It must carry the goods well from the producer to the user; it must still be suitable as a preserver of the goods, even after having been opened and reclosed. It must also, though, secondarily, be inexpensive.

I wish to repeat that proper containers just such as these are to be had. But

they must be asked for. And this is the pharmacist's opportunity! *Ask for them.* Do more than that, *insist* on having them. The customs of the trade at present are such that most articles of the kind here referred to are sold in the *cheapest* containers, almost wholly regardless of suitability. It is a mistake, but one that can be remedied. On your orders *specify* the exact containers that are desirable.

This leads to a feature of the question that cannot be overlooked. How is one to know just what kind of container is suitable? It is largely a matter of experience. If your resorcin turns pink, it is a good sign that it is being subjected to dampness and the action of the air. If your sodium carbonate and your borax have turned white, they have been allowed to dry out. Use air-tight containers. It is a matter of experience to decide what particular kind of container is best suited to your part of the country and your conditions. However, our textbooks and our books of reference, especially our Pharmacopœia and our National Formulary, can greatly assist us in this. In these books can be stated more fully the properties of many articles, and how better to avoid deterioration. Suitable containers can be described more fully by these books. Such descriptions and statements would, of necessity, be found under the individual articles rather than in the form of a general statement applying throughout the books.

The writer is not unmindful of the fact that deteriorated articles give results to the physician unlike those obtained by the use of undeteriorated articles. It is well known, too, that many pharmacists have difficulty in preparing certain prescriptions, elixirs, solutions, etc., because deteriorated goods are employed. The goods having dried out, for example, are no longer the goods called for in the prescription, elixir, or solution. The result is frequently a precipitate that cannot be accounted for, or some other manifestation of irregularity.

Deteriorated goods, generally due to the use of improper containers, no longer have the physical properties expected. They do not have the expected alkaloid content, or perhaps the expected ash content, or the expected solubility, or the expected melting point, or what not. They are unreliable, and should be avoided. And the way to avoid the deterioration is to prevent it.

Closely connected with this question of containers is the question of storing goods. It is not desired here to speak at length upon this topic, although much is to be said, and needs to be said. It is sufficient at this time to say that, if the pharmacist really wants to handle good goods of the kind here mentioned, he must, of course, first obtain them in proper containers, and then, secondly, keep them properly.

In conclusion, and in brief, (a) goods deteriorate for lack of proper containers; (b) proper containers for all articles are procurable; (c) to get them with certainty it is at present necessary to ask for them, at times with emphasis.

DISCUSSION.

Mr. Murray said he was in a position to see a great many goods that were put up for the trade, and knew from practical experience that when some of the goods would go out they would certainly spoil eventually, but the present demands of the trade were such that it could not be helped. He was here, therefore, merely to advocate that the retail pharmacists should help themselves a little bit. He had in mind no particular container. No one container would be suitable. Each article needed its own container, and sometimes in different parts of the country different containers were desirable for the same article. Just before

leaving home, an order had passed over his desk containing about a dozen items, and it was such a good example of this topic that he had copied it. This question of improper containers was not confined to the East nor to the West, though he thought the West was a little bit worse off than the East, because of the freight. Mr. Murray read the following list that a large house manufacturing pharmaceutical preparations had ordered:

Mercury Iodide Red.....	Paper.
Codeine Sulphate	Carton.
Digitalin German	Carton
Sparteine Sulphate	Carton.
Iron Arsenate	Carton.
Quinine Arsenate	Carton.
Mercury Iodide Yellow Powder.....	Paper.
Ferrous Iodide Powder.....	Carton.
Arsenic Iodide	Carton.
Aconitine Crystals	Carton.
Strychnine Arsenate	Carton.
Quinine Valerate	Carton.
Phenolphthalein	Paper.

Besides those mentioned, there were four other articles on the order, but they did not specify the container. It was not unusual to receive such orders. He had seen many orders for goods to be imported, which were going to colleges that taught chemistry. They ordered many things in cartons which the pharmacist was unable to keep in glass bottles. He thought the quickest and best relief was for the pharmacist to ask for proper containers and insist upon them, because he knew they were to be found in the trade at this time, though they were somewhat difficult to get at first.

C. A. Mayo of New York said he thought Mr Murray might well have supplemented his paper by a tabular statement of the classes of things which required a certain kind of container. He was aware that it might look like an elementary procedure, but he was sure the paper would have been much more practical and valuable if the author had supplemented it by giving some practical suggestions of the classes of drugs that required certain containers—although it was known, of course, that such drugs as sodium salicylate could not be dispensed in paper cartons. He thought it would be valuable to have the druggists' attention drawn to this important matter.

Mr. Jones called attention to the pharmacopœial requirement regarding containers for certain drugs, and said that the Drug Commissioners of some states required that drugs should be sold in containers as specified in the U. S. P. and N. F.

L. G. Blakeslee of St. Louis said he had only heard the last portion of Mr. Murray's paper, and his remarks supplementing it reminded him of something which had occurred here the evening of his arrival. He had overheard a conversation in the lobby of the hotel, in which the manufacturers were being condemned in round terms for sending out certain chemicals in unsuitable containers. His idea was, that the pharmacist should be the man to specify the container. He was satisfied the manufacturer would prefer to send drugs out in containers that would preserve them, and all the manufacturers furnished lists in which were specified all kinds of containers, bottles, cartons, cans, or whatever might be suitable for the particular drug or chemical, and all the pharmacist had to do was to specify what he wanted. In some localities sulphite of soda and salts of that character might be ordered in paper cartons, where the pharmacist expected to dispose of them quickly. Mr. Murray's paper was evidently based on the idea that pharmacists should understand this requirement. If the retailer desired his chemicals and drugs in a particular container, he should understand and specify the kind of container he wanted.

Mr. Jones said that in his section the pharmacists specified the kind of containers desired, but it was often impossible to obtain them from the jobber. He had known of sulphuric acid being shipped in cork-stoppered bottles, and a number of other things in equally improper containers. The jobber said it was impossible to get from the manufacturers the proper containers. It was up to the manufacturer and the jobber to correct

these conditions. He expressed the belief that the trouble was primarily with the manufacturer of chemicals.

Frank E. Mortenson of Pueblo, Colo., said he thought that while the retail pharmacist could help himself, he ought to begin at the bottom. The U. S. P. specified how a drug should be kept. When he came to buy, he would find that such a firm as Squibbs would put up their chemicals in the proper containers in every case, and if it was a substance that would only keep for a short time, he would find printed plainly on the label the precaution he should take when it arrived.

Cornelius Osseward, of Seattle, expressed his surprise to learn that any druggist would order such a thing as yellow iodide of mercury or red iodide of mercury in paper. He admitted that he might be "green," but he knew the jobbers were often to blame for sending out goods in unsuitable packages. All of his shelf-ware was in amber glass, he said, and he would have nothing in white bottles. He thought this had a good deal to do with deterioration in chemicals, the standing on the shelves from day to day and week to week, in improper containers. He was convinced that from experience chemicals would keep longer in amber bottles.

Chairman Utech related an experience he had had on the Drug Adulteration Committee of the Pennsylvania State Association. In that organization they had had occasion to interview some jobbers with reference to this question, and had learned that since the passage of the Pure Food and Drugs Law the wholesalers were trying to do what they could in the matter. He said he referred to the handling of bulk chemicals, such as magnesium sulphate. It was not an uncommon thing to get such chemicals with small sticks of wood and nails in them. When it came to sending out such salts as sodium bromide, potassium iodide and the like, if it happened to be a damp day, very frequently the paper would become so softened as to impair the quality of the whole package. He did not think the jobbers were entirely at fault in this matter, as it lay largely with the pharmacist himself as to how he received these articles: he could get what he wanted, and get it right, if he insisted upon it.