

art. For it may be possible that as many persons are gathered to their fathers each year by careless, routine and unscientific prescribing, as by cancer of the stomach, or even, I believe, intraligamentous cystoma.

What would be said of the surgeon who used his instruments of precision in so careless, unskilful or unscientific a manner as to actually cause the death of the patient he was pretending to heal? And yet he would not be more culpable than is the physician who, either from carelessness or ignorance, orders a routine prescription, with, say, large quantities of opium to break up the cough, for a young woman, with perhaps a latent, perhaps a recently acquired, pulmonary trouble. In the former case the fault of the medical attendant may often be easily noted; but inasmuch as the instruments of the physician, which should be, and would be, if our science were truly a science, instruments of precision, work in the dark, the fault of the prescriber is not brought to the light. And I am firmly of the opinion, moreover, that if the damage done by weak, ignorant and harmful prescribing were as patent, and were at the same time actionable at law in the same manner as is imperfect surgery, such as badly treated fractures, unreduced dislocations, etc., then we should have fewer shot-gun prescriptions, in which there is a hope that the game may be brought down by one of the many agents used as a matter of routine.

Let anyone examine a hundred or a thousand formulas for cough mixtures, which he may see, not in chemists' shops, where they are private property, but in medical journals, and he will discover most unequivocal evidence of the compounding of medicines without a proper knowledge of their actions, of gross ignorance as to the pathological conditions present, and a total disregard of them. Thus he will find side by side in the same prescription *vin. ipecac* and *ammon. carb.*; *vin. antimoniale* and *senega*, *alkalies* and *squill*; *pot. iodid.* and the *balsams*, *jaborandi* and *syrops*, and many others which I need not mention, which are, as these are, diametrically opposed to each other in their action on the bronchial mucus membrane, and should not therefore be compounded except under the most peculiar and almost unimaginable circumstances. It is not given to us to

prescribe expectorants at the present day at any rate, by inspiration, neither can we truly say of a physician that he

“By long experience may attain  
To something like prophetic strain.”

Empiricism reigns, under the most favorable circumstances, over a large number of subjects in the domain of medicine, and while our knowledge of expectorants is to a considerable degree empirical, we have enough scientific data to go upon, were we careful in each case presented to us to use them, to enable us to prescribe the known remedies rationally, not only to the great benefit of our patients, but to the advancement and credit of our profession. I must ask you to allow these considerations to be my apology for bringing before your notice this subject, with which the majority of you are from experience more capable of dealing than I am.

Expectorants may be defined as remedies which facilitate the removal of secretions from the respiratory tract. This they may accomplish in several ways, of which the following are the most important:

1. By altering the nature of the secretions either in the act of their elimination, or acting systemically, in a manner not explained, making it thinner and more easy of expulsion.
2. By increasing the flow from the congested and turgid mucous membrane, through their effects upon the vessels.
3. By mechanically dislodging it in the act of vomiting.

To these may be added remedies which relieve spasm of the bronchial tubes, as in asthma; those which soothe the irritable respiratory centre; and those which act reflexly through the nerves of the mouth. These latter three classes, while hardly coming under the definition, may be regarded as true expectorants, inasmuch as they are indicated by the pathological conditions for which expectorants are used, viz., the relief of cough, the relief of dyspnoea, and the removal from the respiratory tract of certain morbid products of disease which are inimical and injurious to the economy of the system.

And as I shall not refer to the apparently mechanical action of certain substances held in the mouth in the promotion of the expulsion of bronchial secretion, I may note in passing