For practical use a few grains are scattered over the preparation to be examined, and any object of interest is compared with a lycopodium grain in its vicinity, an object half as wide measuring 15 microns, one twice as wide, 60 microns, etc. With a little practice one can easily determine whether an object is, for example, nearer 20 microns than 25 microns, or *vice versa*. The lycopodium grains are not always wetted with aqueous fluid, so that in the preparation they are sometimes seen surrounded by a layer of air, but the inconvenience of moistening them with alcohol or otherwise and keeping them in some fluid is not counterbalanced by the slight advantage of having them free from air bubbles.

The dry lycopodium is conveniently kept in a hard gelatin capsule, which is easily carried in the pocket so as to be always at hand when needed. The size known as the Number 1 or five-grain capsule is large enough to be handled without difficulty and not so large as to be liable to accidental crushing. If each capsule is filled about one-third full a hundred capsules will require only two or three drams of lycopodium and the cost of both is negligible.

In furnishing these capsules to a class of students in clinical microscopy, it will be necessary to give a few directions as to the best method of using them. Any attempt at pouring or shaking out a little lycopodium will not only use up an unnecessarily large amount of the material, but will deposit the grains in large, opaque masses in a very irregular manner. The "cap" of the gelatin capsule should be removed and its edge scraped against the edge of the other half of the capsule as they are held just over the microscopic preparation. In this way the thin layer of lycopodium adhering to the inner surface of the cap is shaken out as a fine dust-cloud which does not settle rapidly, but by gentle blowing may be easily sent against the moist preparation and distributed very uniformly over it.

The results of this method of making measurements are very striking. Students who have previously been unable to give even an approximate estimate of the size of an ordinary tube-cast, an echinococcus hooklet, a tapeworm egg, etc., quickly acquire a definite conception of the magnitude of such objects, and it is a very different kind of knowledge from that which results from the mere memorizing of a row of figures.

3752 Powelton Avenue.

MUSTARD PACKS IN TREATMENT OF CAPILLARY BRONCHITIS IN CHILDREN

A. A. HERZFELD, M.D.
NEW YORK

Mustard has been in use as a counter-irritant for many centuries, but it is astonishing how few physicians are acquainted with its excellent properties as a counter-irritant in the treatment of capillary bronchitis and bronchopneumonia in infants and children.

Most doctors content themselves with the use of some patented, odoriferous kaolin or clay paste. These patented pastes have many disadvantages. In the first place, they hinder by their weight free respiratory movement; second, their action is entirely insufficient; third, they may cause a severe dermatitis by blocking up the openings of the sebaceous glands. I am acquainted with one case in which an erysipelas was directly traced to the application of one of these patented pastes.

The value of counter-irritants in the treatment of capillary bronchitis in children has been amply demonstrated. Mustard is one of the simplest and most active of counter-irritants and one to whose efficacy in this condition there is ample testimony. It is especially indicated when such dangerous symptoms as severe dyspnea, asphyxia, cyanosis and great general prostration arise. Up to the present time, when used for this purpose, it has been mostly applied in the form of a paste or a mustard water (Heubner). For the past thirteen years I have been using a method of my own device. Both my colleagues and myself are so convinced of its undoubted efficacy, and the method possesses so many advantages over other methods of counter-irritation, that I feel constrained to publish this method here.

Two hundred and fifty c.c. (half a pint) of water and 250 c.c. of alcohol are mixed in a large bowl; to this is added from 25 to 50 c.c. (1 to 2 fluidounces), depending on the severity of the case, of freshly-prepared spirit of mustard. The spirit of mustard is prepared according to the German Pharmacopeia (the volatile oil is the active principle of mustard):

Oil of mustard.....	1 part
Pure alcohol	49 parts

A large piece of flannel is well moistened with the mixture and the body of the child wrapped up from the neck to the knees. This moistened flannel is then enveloped in a dry sheet and the child is left in this pack until the skin is bright red, which point is usually reached at the end of fifteen to thirty minutes. The child is then taken out and wrapped and left for another half-hour in a pack moistened with a mixture containing one part of alcohol and two parts of water. At the end of this time the child is wrapped up in a dry sheet. In most cases one well-applied mustard pack will suffice to bring about a permanent improvement. Relapses, however, are of frequent occurrence, whereupon packs are renewed. It is not advisable to apply the pack more than once in twenty-four hours unless the indication is unavoidable. It is advisable that the physician apply the first pack himself, not only to determine the strength to be applied, but also for purposes of instruction to the parents or nurses. The effects of this mustard pack on the child are truly striking. The cyanosis disappears promptly, the dyspnea is relieved, the pulse improves considerably and the mental condition of the patient is notably brighter. The transition from a state bordering on collapse and one which in some instances may even be termed moribund, to a condition in which the clinical picture becomes immediately more roseate, is not, I venture to say, effected so rapidly and satisfactorily by any other therapeutic weapon at our command. Heubner of Berlin explained the beneficial effect of the application of mustard in these severe cases of capillary bronchitis as follows:

The lungs of children who have capillary bronchitis and bronchopneumonia show a very pronounced hyperemia and a dilatation of the blood vessels in the walls of the bronchi. The bronchial tubes themselves are entirely stopped up with secretion. The skin of these patients presents an extreme pallor. The hyperemia of the respiratory tract may be termed an inflammatory stasis of the blood in the lungs. The hyperemia caused by the counter-irritation of the mustard on the skin, therefore, opens up a new territory for the circulation of

the blood. Hence, the quantity of circulating blood in the lungs is diminished in a given space of time, the work of the heart is reduced and the rapidity of the circulation of the blood in the lungs increased.

SUMMARY

The advantages of my method of applying the mustard pack in capillary bronchitis and bronchopneumonia of children are as follows:

1. It is surprisingly rapid in effect.
2. Its light weight does not materially hinder respiratory movement.
3. It can be applied without removing the enfeebled patient from the bed.
4. It is inexpensive.
5. It is clean.

224 West Twenty-Fourth Street.

REMEDY FOR THE PAIN OF INSECT BITES

PATRICK MOLONEY, L.R.C.P., L.R.C.S.

CAPE COLONY, SOUTH AFRICA

The bites of mosquitoes and various gnats, the stings of wasps, bees, etc., have often produced a considerable amount of pain and discomfort and even death has resulted as a consequence of such stings in human beings.

No effective remedy, as far as I am aware, has been recommended for the alleviation of the suffering caused by these insects. The flesh about mosquito-bites if irritated or rubbed very often suppurates and a considerable slough comes away.

For some time past I have used iodine crystals in saponated petrolatum, 30 to 40 grains to an ounce. A few drops of this is rubbed over a mosquito-bite with magical effects. I have also rubbed it over parts stung by wasps of various sorts and sizes. The pain of the sting was very quickly relieved. It seems to me it might be used, in addition to other measures, in cases in which one was bitten by a viper.

Therapeutics

PROPRIETARY PREPARATIONS VERSUS THE UNITED STATES PHARMACOPEIA AND NATIONAL FORMULARY PREPARATIONS

The following are criticisms of the exclusive use of the United States Pharmacopeia and National Formulary preparations:

1. If physicians were to confine themselves to these preparations, useful new drugs would never become known, and the medical world and its patients would thus be deprived of valuable remedies.
2. Many of the Pharmacopeia and National Formulary preparations are imperfect in their make-up, and are poor imitations of proprietary preparations.
3. Some products must be ordered by proprietary names, and hence consistency is broken in favor of certain firms.

There is no question that there are a few valuable drugs (not mixtures) that have no recognition in the Pharmacopeia and National Formulary. To avoid this omission, once in five, or perhaps better once in three years, there should be issued an addendum to the Pharmacopeia which should contain drugs found valuable by investigations made by the Committee on Revision of the Pharmacopeia. Drugs so recommended would

be considered official and would be incorporated in the next Pharmacopeia. At present the Council on Pharmacy and Chemistry is investigating new drugs and putting its honest stamp of approval or disapproval on each. The value of such investigation and such recommendation is inestimable to the practicing physician.

There is no excuse for a large number of products produced by different firms which differ but slightly, if at all, in their chemical action or in molecular constituency. It would be obviously impossible to recognize all these drugs in the Pharmacopeia. Also if a physician tries several drugs or preparations which differ from each other *in name only*, and then, influenced by the ever-varying behavior of the same drugs with different individuals, reports that one preparation is far ahead, in its favorable action, of all the others, it can readily be seen that such medical reports are grossly deceptive, sometimes prejudiced, and often unwittingly absolutely untrue. This is the reason that one physician declares such and such a silver preparation, for instance, to be far better than all others, a second prefers another preparation of silver, and a third still another. Chemical analysis will show that these preparations are practically alike, and careful clinical investigations, *long enough continued*, will show that each of these preparations acts similarly to the others, provided that the dose of the active ingredient is the same. Likewise, the various iodine combinations which are said "to give no symptoms of iodism" are shown by chemical analyses to contain such small amounts of iodine that they could not give undesirable symptoms. In other words, if as small a dose of potassium or sodium iodide should be given as is represented by the amount of iodide in the recommended dose of the proprietary product, the absence of unpleasant symptoms would be the same.

On the other hand, when a physician uses every proprietary preparation or drug that is presented to him he will very soon, *by the variations in clinical experience and results*, unjustly condemn a splendid preparation offered him by one firm and laud a similar but inferior preparation offered him by some other firm. This is manifestly unjust to the pharmaceutical firm that produces the best preparation. The physician in general practice has no way of determining which of these preparations is the best. Consequently there should be some referee to determine this for him, and the Committee on Revision of the Pharmacopeia should be the court of appeal. In the meanwhile the Council on Pharmacy and Chemistry of the American Medical Association is presenting honest reports of the products offered it for investigation.

It is true that many National Formulary preparations, as well as some of the Pharmacopeial preparations, are imperfect, as, for instance, some of the organic iron preparations. If a physician does not think that he can get the results desired from the simple iron preparations, and wishes to order an organic preparation, an honest druggist should furnish him with the best preparation that can be bought. If the best preparation is made by a certain firm, the druggist should buy that preparation of that firm. It should not be necessary for the physician to specify. To put the druggist on his honor, a physician writing for any preparation that is not readily made by the pharmacist himself should write after the preparation "the best," and the druggist so trusted should furnish the best preparation and charge the patient what he must for the best.