and replace the worn-out tissues; and the non-azotised, or combustive, which furnish food for the lungs, supporting respiration and animal heat. Now, it is a curious fact, which he also established, that, though the fibrin, albumen, and casein, which constitute the chief of the first or azotised class of alimentary substances, exist in vegetable as well as animal food, animals have not the power of forming in their own bodies any of those azotised alimentary principles. They are primarily derived from the vegetable kingdom; and the digestive organs of animals have no power of producing them, but merely of assimilating what has been already formed by plants, or previously drawn from the vegetable kingdom by some other animal. These views met with considerable opposition when they were first advanced; but their correctness is now generally admitted, and there is no essential difference in the chemical composition of fibrin procured from vegetables and that obtained from the flesh or the blood of an animal, or between vegetable and animal albumen or casein.

Of the other class of alimentary substances—the non-azotised—the chief use of which is to supply food for respiration and the support of animal heat, the principal are starch, sugar, oil or fat, and alcoholic liquors. These unite with the oxygen absorbed at the lungs, and are the chief source of the carbonic acid and watery vapour given off by these organs. They are, in fact, burnt by a process of slow combustion, which is the great source of the high temperature of animals.

It appeared to me that, as this function of the lungs must necessarily be more or less impeded in all pulmonary diseases, and as cod-liver oil had been found so beneficial in that particular disease, consumption, advantage would be gained by selecting from this, the non-azotised or combustive class of alimentary substances, such of them as would have the greatest tendency to unite readily with the oxygen absorbed at the lungs; and thus, in the disabled condition of these organs, to facilitate the performance of their functions.

I was thus led to inquire which of the non-azotised or combustive class of alimentary articles are most readily digested, and have the greatest affinity for oxygen. Sugar of milk is an article belonging to this class of aliments, which possesses these properties in a high degree, and is deserving of more attention than it has yet received as an article of food. I shall therefore state a few facts respecting it, which seem to me sufficiently interesting to be worthy of being brought under the notice of the profession.

There are three principal varieties of sugar—cane sugar, milk sugar, and grape sugar. They are closely allied in composition, though they differ considerably in chemical properties. All kinds of milk contain sugar of milk; but it is worthy of notice that asses' milk, which has always had a greater reputation than any other kind, as an article of food in consumption and other pulmonary diseases, contains the largest proportion, relative to the caseous and oleaginous principles, of any kind of milk. Whey, which consists almost entirely of sugar of milk, has also been found a useful article of diet in consumptive cases.

When we inquire into the chemical properties of milk sugar, we also find that it has so strong an attraction for oxygen, that, when dissolved with an alkali, it has the power of reducing more or less completely some of the metallic oxides. It is readily absorbed into the blood, which, being an alkaline fluid containing oxide of iron, furnishes the necessary conditions for its oxygenation. Besides this, its composition is such, that it must be readily converted into carbonic acid and water. There is only one other point in relation to its fitness to supply material for respiration, which I shall at present notice. It is the fact, originally pointed out by Liebig, and now admitted by physiologists, that one of the great offices of the liver is the preparation of combustive material for the respiratory process. This is a point which has not been sufficiently kept in view by medical men; but it is one of great practical interest, when we consider that the function of the lungs and that of the liver are so intimately connected and mutually

dependent, that derangement of the secreting function of the latter must necessarily interfere with the former, and may not improbably be one of the chief causes of a tubercular state of the blood. The liver prepares the combustive materials for respiration; and of this there are two sources, one being the worn-out tissues of the body, the hydrocarbonaceous part of which forms bile, and, being re-absorbed, is consumed at the lungs; the other is the saccharine and fatty matters of the food, which are consumed in a similar way. It would seem, however, that the liver has not only the power of preparing the latter, but also of forming saccharine at least, if not oleaginous matters, from the blood. A defect in this power may be one of the great causes of tubercular diseases; and if we can, by giving a ready formed oil which is stored up at certain times in the liver of the cod-fish, rectify to a great extent any defect in its action, so far at least as the oleaginous material for respiration is concerned, there is good reason to expect that still more may be gained by giving, in a ready formed state, the other combustive material, the saccharine.

The facts I have brought forward have led me to use sugar of milk in the treatment of consumption; and, as I have seen benefit from its use, I wish to recommend it as an article of food deserving of more attention in the treatment of this disease than it has yet received. I believe also that they embrace an important principle, applicable to the dietetic treatment of other diseases.

Liverpool, June 1st, 1853.

READY MODE OF APPLYING THE DOUCHE, AND OF ADMINISTERING INJECTIONS OF WATER.

By J. INGHAM IKIN, F.R.C.S. Eng.

IN directing the fitting up of a small Hospital for the Diseases of Women and Children, just opened in this town, I have adopted a simple and effectual plan for the application of the douche, and for the administration of water injections, both of which are very useful in the treatment of many disorders of women. As I am not aware that this exact mode of employing water has been recommended or used by the profession, I now call attention to it through the medium of our JOURNAL.

To every floor in the new hospital, hot and cold water is carried; the latter being supplied by the town water-works; the former, by a reservoir placed in the attic, heated by pipes connected with the kitchen fire. To the pipes and taps in the lavatory and bath-room, I have had additional screw taps attached at the side, to which is appended a length (about two yards) of gutta-percha tubing, of somewhat smaller diameter than that now commonly used for cleansing carriages, etc. There is, at the end of the elastic tube, a brass screw, to which terminal pipes of different kinds can be attached; for example, an ordinary straight one, with a single aperture; a vaginal one, with a number of orifices, as in a female syringe, etc. As the pressure on the water in the pipes (which communicate with the mains) is always considerable, it is expelled with great force, which can be regulated by the screw tap, at the will of the patient or nurse, according to circumstances and the effect produced. It is a simple and effectual mode of applying the douche, and of giving water injections.

The proper and judicious application of water, in the treatment of many diseases, either local or general, we should not overlook, nor allow quacks, hydropathists, and others, to obtain credit for modes of treatment which, in judicious hands, can be skilfully and discriminately used, though they will not be abused, or used merely as a means of *pumping* the pockets of the patient, and gulling the public.

As a shower bath, especially for children, I may add that I find the pneumatic apparatus (an old invention, I believe, recently come again into fashion) to be very convenient, especially when a severe shock is objectionable.

The cold sitz-bath is certainly a most convenient and useful form of bath, especially to females subject to leucorrhœa and relaxation of the muscular system.

The proper distinction now made between vaginal or epithelial leucorrhœa, and uterine, cervical, or mucous leucorrhœa, is eminently useful, and has been very accurately described by Dr. Tyler Smith. My own researches entirely confirm his views; and I feel indebted to him for his able investigations, which I hope to be able still further to support at a future time by the publication of some microscopic examinations and cases of my own.

This leads me to remark that, in the use of the glass speculum, without the covering—that is, a transparent one—some risk is run of its breaking, but only when it is improperly made, or too violently introduced. I would, however, caution against using it without the plug, as the edges may lacerate the vagina. A plug of firm sponge answers very well, and can be readily withdrawn. The bivalve metallic speculum, I agree with Dr. Bennet, is, on the whole, by far the most useful instrument.

In concluding this desultory notice, I may repeat what has been so often proved by higher authorities, that, with regard to the use and application of water in the treatment of disease—that the claims of the hydropathists, or those of the founder of that sect, are very inferior to those of Currie and many other regular scientific practitioners. I may be allowed to add that, nearly twenty years since, I wrote a series of papers on the German Mineral Springs, for the *Lancet*, in which the use of cold water, the douche and the bath in all their forms, were pointed out as eminently useful in many diseases, both in man and the lower animals. The practice of intelligent physicians at the different spas, both at home and abroad, had proved this fact long before hydropathy was known.

Two great lessons the profession have, or should have, derived, from the temporary success amongst certain classes of hydropathy and homœopathy: these are, first, never carelessly to overlook the remedial efficiency of water, and its various forms of application; and second, to attend more to the diet and habits, and general hygiene of patients, and to discard the system of *overdosing* (I only say *overdosing*), and ringing the changes on purgatives, diuretics, alteratives, tonics, etc., etc., when such agents are not *absolutely* required; or pressing attendance beyond reasonable limits. The charge for attendance and advice will, in the majority of cases, be much more willingly paid, than a bill of the old school for mixtures, pills, and potions.

Leeds, June 13th, 1853.

BIBLIOGRAPHICAL NOTICES.

PRACTICAL TREATISE ON DISEASES OF THE SKIN. By J. MOORE NELIGAN, M.D., M.R.I.A., Hon. Fellow of the Society of Physicians of Sweden, Physician to Jervis Street Hospital, and Lecturer on Medicine at the Dublin Hospital School. pp. 429. Dublin: 1852.

THIS book opens with a chapter on the classification of skin-diseases, and several interesting general observations are made. The following remarks, on the effect of skin-diseases on the system generally, will interest some of our readers:

“An important view in which diseases of the skin must be regarded, and one that adds much to their interest, is the effect they produce upon the system generally. We sometimes find that, in persons who have laboured even for a long time under these affections, but little constitutional derangement is, in many cases, caused by them; so little indeed, that it has been doubted whether the existence of an affection of the skin, in a chronic form, tends to shorten life, or should be taken into account in coming to a conclusion as to eligibility, in a medical examination, for assurance. For my own part, I believe that, as long as the individual remains unaffected with any acute or inflammatory affection, the existence of a skin-disease will not in any respect diminish the average chances of longevity.”

These views, coming as they do from so practical an observer as Dr. NELIGAN, are highly valuable.

After sketching the various classifications of skin-diseases that have been made by writers, and after showing how difficult a thing it is to make an artificial classification that shall be at once truthful and simple, Dr. Neligan proposes “to divide cutaneous diseases into ten groups or orders, as follow:—1. Exanthemata; 2. Vesiculæ; 3. Pustulæ; 4. Papulæ; 5. Squamæ; 6. Hypertrophie; 7. Hæmorrhagiæ; 8. Maculæ; 9. Cancrodes; 10. Dermaphytæ; adding two supplementary groups, Syphilides, and Diseases of the Appendages of the Skin.”

We congratulate the profession on being possessed of so simple an arrangement of what are called cutaneous diseases; but we should congratulate it much more, if we could have seen the author before us dispensing with classification altogether.

How long, we wonder, how long, will the system of making disorders, and of transforming the symptoms of disease into diseases themselves, continue? Dr. Neligan says, that the past plans of arranging skin-diseases into classes have been either too artificial or too complicated. This is true. Dr. Neligan might have gone further, and said what we have every reason to believe he thinks, that it is monstrously absurd to speak of any appearance on the skin, except as of a sign indicating a derangement of one or other of the leading functions of the body. Let us give an illustration of what we mean. If the skin be covered with a white scurf, or be cracked and fissured here and there, it is looked at with a most piercing glance, and is said to be suffering from some extraordinary disease with a still more extraordinary name: but let the tongue, which is but a continuation of the surface of the skin, be the seat of these appearances, and straightway they lose their importance altogether; the tongue is said to be foul, or dry, or fissured, and to indicate the condition of the system; but the tongue is not said to be suffering from any special disease: and the man who might say that it was, would be rightly considered as something little short of what the Scotch call “an innocent”. Look at the matter reversed. Let the skin be universally pale, and sweating at every pore, and it is never described as suffering from any disorder, but is said to be in a state that expresses in some way the nature of another disease, say consumption. Let it be unusually dry, shrivelled, and dingy, and again it shall not be diseased, but in a condition indicating some such disorder as diabetes. Or again, let it be yellow and dry, and it shall only point out that the liver is undergoing abnormal change. But let the skin be red and dry, or red and rough, or spotted in half a dozen places, and at once it is petted like a drawing-room fop, is considered as in a very bad state, is treated peculiarly, and is described as suffering from a vesicular, an exanthematous, or a pustular disease. Surely such classification of diseases is not merely artificial, but is also exceedingly superficial.

However, we ought not to find fault with Dr. Neligan. Reforms must proceed slowly to proceed surely; and, until the professional mind is fully prepared to receive the doctrine, that disease is an unity with a variety of phenomena, it is better not to put the doctrine fully into practice, but to lead the mind toward it by simplifying old classifications, as Dr. Neligan has now done.

We have not much space for following our author through his thirteen chapters on the symptoms and treatment of the diseases included in those classes which he has proposed, and we have copied. He does not admit measles or scarlet fever into his list of exanthematous diseases; but he treats largely on erysipelas. Here is a passage which refers to the local treatment of erysipelas:

“When erysipelas is spreading rapidly, although superficially, over the cutaneous surface, the inflammation still persisting in the parts where it first appeared, inunction with mercurial ointment has in my experience more effect than any other local application in checking its progress. The ordinary mercurial ointment, to every ounce of which a drachm of glycerine has been added, should be smeared thickly over the