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THE MANITOBA AND WEST CANADA

# LANCET

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## ORIGINAL ARTICLES

### INCISION AND EXCISION IN PELVIC FLUID COLLECTIONS

By J. O. Todd, M.D., Winnipeg.

I am well aware of the mine of discussion that underlies the heading of these remarks, for under the banner of incision will be ranged those disciples of the principles of conservatism in surgery; while under the bunting of the excisionists will stand the radicals in pelvic work. Anyone following the course of the discussions of expert pelvic workers cannot, I think, but be amazed at the fact that, with a common pathological groundwork to start on their courses of treatment, should so materially vary; and that in a profession where calmness and deliberation ought to prevail, there should arise camps, hostile to one another and attacking each other with a venom that leaves lingering lesions in both the minds and the work of all concerned. I think I state the trutr when I say that conservatism, when applied to the practice of general medicine and surgery, is a term that draws forth the respect of the majority of the profession. The greatest names in medicine and surgery are those of men of moderate views. It is a Fogge, or an Osler, who stamp themselves as leaders of medical thought, and it is an Erichsen, or a Dennis, who give permanent weight to surgical opinion. Such men are, or were, conservatives in their opinions and practice. But, only let a fellow-worker in the devious windings of pelvic sepsis raise his voice in behalf of the unfortunate uterus and its appendages, and what a howl goes forth from the radical camp. "Conservatism is an excuse for cowardly surgery" will be their retort. It is a rule that holds good in general surgery to save all you can consistent with the circumstances of the case, but advance such beliefs before the specializing star in pelvic tragedy and what abuse and sarcasm will be brought from him. Brilliant and daring as is such an operator as Joseph Price, of Philadelphia, I still cannot but believe that his influnce as a leader in gynecology is bad. Sift his sayings and writings, and what have we? Any principles of safe, permanent application? It seems to me not, but instead an assortment of coarse screenings that have one common aspect, viz., the individuality of their author. It is a curious, but it is, nevertheless, I think, a notable, observation that a man will follow the lines of general medicine and surgery with, usually, a mind open to conviction and ready to learn from the experience of others, but, let him gravitate to the regions below the brim of the pelvis, and it then behoves him that he stand upon every knoll, and, like the chanticleered autocrat of the barnyard, cock-a-doodle-doo his opinions to the assembled hennery, as the only ones right and proper to be followed. Does the reason for this bumptiousness, Mr. President, lie in the fact that there is a woman in the case? Pathologists, and other medical workers, do not attack each other with bitter personalities, however

opposite their premises may be, but, as a rule, in gynecological discussions charges and counter charges mar the dignity of debate. It would seem to me, Sir, from my observations of the men of this continent having their field of work in the pelvis, that they can be classed under the two heads, surgeons and operators. Preserve, oh ye gods! any of my immediate lady friends from the uncontrolled clutches of the latter. The operator reigns supreme king of the ampitheatre. He washes his hands upon the completion of some pelvic brilliancy, before an admiring audience from the country, as a member of which I have myself left the operating room borne down by the sense of my own diminutiveness and conscious of the darkness of the fate that destined me to return to my hayseed practice, to minister to the needs of colicky infants and lumbagoed fathers. Is it provocative of sober deliberation to have such phrases thrown out in discussion as this from the no-drainage fanatic: "There is no need for drainage in abdominal work. The man who drains is a dirty operator." Or this from the soap and water man: "The operator who has need of corrosive poison to render himself fit for the operating table had better take a month's vacation to prepare himself." I hope I shall be pardoned for some digression, in view of the importance of the line of thought upon our subject.

Pelvic fluid collections can, I think, from such experience as I have had, be divided into two main classes:

(1). The septic.

(2). The non-septic, or simple.

These two large divisions I would subdivide into

(a) Those with adhesions.

(b) Those without adhesions.

So that we have then

(1). Septic collections with and without adhesions.

(2). Non-septic collections with and without adhesions.

In handling these conditions it appears to me that the first point to be determined is the extent of the adhesions, for I do not think I mis-state the facts when I say that in no class of cases does an operator feel the uncertainty of his post-operative prognosis so much as in abdominal excisions with extensive adhesions. There is no sign known to me whereby the friends downstairs can be assured that such a patient will live twenty-four or forty-eight hours after operation. With such a dreadfully dangerous proceeding before us, then, I maintain that it is but right that we weigh well the necessity of resurrecting from its intestinal grave the buried cyst. In malignancy we have a pathological basis for thorough excision, irrespective of injuries to adjacent organs, but in adherent sacs of pent up fluid, here, as in other parts of the body, why should excision be demanded before simple incision and drainage? Frequently have I heard the daring Joseph Price advise "the ploughing out of everything in sight" "Tear down adhesions, leave not one behind; if you open the bowel, never mind, sow it up again." Well, Sir, after we have ploughed out, left nothing behind, opened the bowel in two or three places and sewed it up again, what have we left but a raw space that engulfs all in sight the moment our sponges are removed; and the adhesions that we have taken so much trouble and time to break up, are replaced by fresh ones that will in time become as firm as the first set. Having before us, then, a case of diagnosed pelvic fluid collection, it would seem to behove us to adapt our treatment. Discriminative, or not dogmatic, action is to follow, and in selecting our lines of action it would appear to be our duty to realize that in the relief of the case in hand, incision, with evacuation of the pent up fluid, has its place at least in the same rank with excision.

Excision means a bold opening of the abdominal cavity, with all the attendant dangers of general infection; it means a breaking down of all adhesions interfering with the removal of the sac, a procedure attended, even in the most prudent hands, by ruptured viscera, and always followed by a grave shock. In short, the

patient is exposed to all the dangers of sepsis and shock in order that the whole sac wall may be removed. In incision we regard the enclosed fluid as the object to be removed, and we choose its point of exit according to a rule that holds good over the whole body, viz., give outlet to pent up fluid at the most presenting point, which will be in our pelvic cases somewhere about the vaginal vault or above the pubes and Pouparts ligament. Taking the classification already laid down, I would be guided in their treatment, whether by incision or excision, mainly by the extent of the adhesions. In septic cases, adhesions are commonly extensive, and it is in their handling that, it seems to me, the use of incision with drainage is especially applicable. In choosing the site of incision, whether it shall be supra-pubic or vaginal, my own cases have led more frequently to the former, and I can simply say that in one only was there any difficulty in maintaining drainage. In not one has there been hernia, and in every case the patient left the operating room in good condition, having been subjected to such simple handling. In every instance the woman has returned to her duties, and each is to-day in good condition. In three of the cases vaginal opening was done, combined in one case with supra-pubic incision. As regards the vaginably-heated cases, there has been no hernia so far, nor other mishap, one of them having since been confined. In twenty-three operations for pelvic fluid collections twelve have been excisions, with four deaths; eleven have been incisions, with no death and most satisfactory results.

## HAIR-CURLING FLUID.

Borax, 3 ounces; carbonate of potash, 2 drachms; gum acacia, 1 drachm; spirit of camphor, 1½ fluid ounces; spirit of rosemary, 1½ fluid ounces; hot water, 40 fluid ounces. Dissolve the solids in the water. When cool add the spirit. On retiring at night wet the hair with this and arrange loosely, or roll in paper as usual while wet with the liquid.—Phar. Jour.

# SELECTED ARTICLES

## THE RHEUMATIC ELEMENT IN VARIOUS DISEASES

The relations between rheumatism and various other affections have been particularly elucidated by the investigations of the French school of clinicians, notably Bouchard and Charcot. The chief affections which have been found to be frequently dependent upon a rheumatic diathesis are various neuralgias, such as migraine and sciatica, chorea, tonsillitis and pleurisy. Confirmatory of these views is the well-known efficacy of antirheumatic remedies in many of these cases. As examples of this may be cited the remarkably favorable results obtained by Marie and Huot from the use of Salophen in chorea; by Claus, DeBuck, and Vanderlinden, Lutz, Lavrand, Goldschlager, Drews and others, in neuralgias; by Woodbury in tonsillitis, and arbour in pleurisy. That the effects of Salophen in these conditions are almost specific, is shown by the large number of observations already published. In the nervous form of influenza, which is more frequently met with at the present day than the other varieties, Salophen alone or in combination with Phenacetine is also promptly efficient in relieving the distressing rheumatoid pains. The advantages of this remedy are well summarized by Dr. John Davis Harley (The Lancet, December, 1896), who says: "For acute, articular and muscular rheumatism, as well as most forms of neuralgia, Salophen is the most successful remedy offered. In my practice, both private and hospital, I have met with phenomenal success with Salophen in all forms of acute rheumatism and neuralgias. Salophen is non-irritating to the stomach and free from any toxic action on the nervous system. As an antirheumatic, antineuralgic and antipyretic, Salophen approaches as near a specific as any remedy known to the profession."—New England Medical Monthly, March, 1897.

## TREATMENT OF OBESITY

The treatment of obesity has hitherto chiefly consisted in the adoption of one of the various dietetic systems, as that of Banting or Ebstein, in connection with the use of drugs which owe their fat-reducing influence mainly to their purgative properties. While some persons obtain benefit from strict adherence to one of these so-called reduction cures, there are many who are unwilling to put up with the attending discomfort,or to whom the treatment becomes so irksome that the patient cannot be made to persevere for a sufficient time to experience its effects. Others, again, are so weakened by a radical change in the diet that it cannot long be maintained. Hence, when some time ago attention was drawn to the fact that many cases of obesity could be improved by thyroid feeding,it was thought that a decided acquisition had been made to the therapeutics of this affection. It was found, however, that owing to their uncertain strength it was difficult to regulate the dose of thyroid preparations, and that partly in consequence of this and partly because of the presence of albuminoid decomposition products unpleasant and even injurious sequelae were not infrequently noted. When, therefore, Baumann discovered the active principle of the thyroid, a triiodothyrin of which with sugar of milk has been introduced under the name of Iodothyrine, he enabled the physician to avail himself of all the benefits of the thyroid treatment in obesity without the drawback of other thyroid products. Experiments made with Iodothyrine by Dr. Grawitz in the medical clinic of Prof. Gerhardt, of Berlin, by Dr. Hennig and others, have demonstrated that even in cases where no change was made in the diet there was a rapid and marked reduction in weight. This was unaccompanied by unpleasant or toxic effects of any kind, so that the new remedy may be considered as a safe and reliable anti-fat and an important acquisition to the treatment of obesity.—American Practitioner and News.

## COLLAPSE OF THE KEELEY CURE

Every now and then there comes along a medical humbug of some sort, the province of which seems to be, as remarked by the editor of the Popular Science Monthly a few years ago with reference to the blue-glass mania, "to test the length, and breadth, and depth of the foolishness of the nineteenth century." The Keeley Cure was certainly one of these foolometers, though it has been by no means so innocent as the blue-glass mania, for it has left behind it a multitude of human wrecks to linger out a miserable existence in insane and inebriate asylums. Not a few young men have allowed themselves to drift under the influence of the drink habit, cherishing the delusion that when the danger-point was reached escape from it would be easy through the Keeley Cure or some similar agency. In this way the popular faith in a medicinal antidote for inebriety has done an untold amount of mischief.

It would be impossible to prepare a more thorough refutation of the claims of the originators of these so-called cures than that furnished by the following from an editorial by Dr. T. D. Crothers in the Quarterly Journal of Inebriety :—

"A valued correspondent writes us that he has gathered from correspondence and newspaper clippings the following facts about gold-cure institutes :

"During the year 1896, twenty-two so-called Keeley gold-cures suspended and dissolved; twenty-seven gold-cures homes where specific treatment for alcohol and opium was given, have gone out of business ; five new companies have been formed to sell rights to use secret inebriate cures ; three ex-superintendents of gold-cure establishments have committed suicide.

"To this we would add that in three years we have made notes of the relapse of nineteen physicians who have been medical directors of gold-cure establishments. Ten of these persons sought treatment in regular asylums where no specifics were used."—Modern Medicine.

## THE BACTERIOLOGY OF BALDNESS

Sabouraud's discovery that seborrhoea is invariably associated with a specific microbe is a fact which is not only new to us, but which was probably scarcely suspected. That this microbe should not only be found in seborrhoea but that it should also be found in alopecia areata ads to the surprise with which these announcements must be received.

M. Sabouraud tells us that if we scrape from the skin the oily exudation obtained by pressure from a part affected by seborrhea, and spread it on a cover-glass, after dissolving the fat by ether and coloring for five minutes in gentian violet, and then discolorizing by Gram's solution, alcohol and aniline oil, we can detect myriads of special microbe which is a very fine bacillus. This bacillus when young is punctiform and almost resembles a coccus. The bacillus is found in rounded masses in the upper third of the hair follicle. When to this bacillus of seborrhea are added other organisms, which is often the case, we get secondary affections of the hair follicles—various forms of acne. The same bacillus affects the sebaceous glands of the scalp, where it produces depilation or baldness. The hair of the affected follicle dies, and it is seen, when examined under the microscope, to be normal in its oldest part and atrophied in its youngest.

Anatomically the seborrhea bacillus leads to progressive hypertrophy of the sebaceous glands and an exudation of leucocytes around the papillae of the hair. After this condition is established the hair falls, and each new hair that takes the place of one that is lost is weaker and smaller than its predecessor. The hair papillae manufacture the hair in the ordinary fashion, but as soon as it is made the ringworm fungus destroys it.

In alopecia areata, however, the fall of the hair is caused by a suspension of the formative power of the hair papillae. The atrophied hairs of alopecia areata differ very slightly to the naked eye from those which are killed by seborrhea; the process is essentially identical. A patch of alopecia areata is an acute local affection of seborrhea. This is proved by the fact that if a section is made through the skin affected by alopecia areata in an early stage, the hair follicles, without exception, are found to be infected by the micro bacillus of the seborrhea, while around the affected surfaces the scalp is healthy and the follicles are not affected. Sabouraud tells us he has obtained in the sheep, the guinea-pig, and the rabbit, characteristic patches of alopecia areata by using cultures of its microbe. The patch of alopecia areata is only an attack of acute circinated seborrhea, and inversely the bald only become bald by a diffused process of chronic alopecia areata.—British Medical Journal.

## CLEANING OUT THE STOMACH

While cleaning out the inside of a man's stomach, Dr. Turck, by means of the Rontgen ray at the same time views the internal apartment where the instrument is at work. The internal work was the first of its kind made in full view of the operator.

The instrument, called a gyromele, is a flexible cable of spiral steel wire, on the end of which was a small sponge. The cable was enclosed in a rubber tube, and this, with the sponge, was swallowed by the patient. The latter, stripped to the waist, then stepped before the Rontgen light. The doctor put the fluoroscope to his eyes, and an attendant turned the handle of the gyromele. The cable revolved as fast or as slow as was desired, the sponge at the farther end proceeded to its work of scouring the inner walls of the patient's stomach, while the doctor, through the fluoroscope, viewed the work, locating the metallic cable by means of the rays. By pushing or pulling on the cable the various portions of the inner walls of the stomach were operated on, and the matter which was gathered in the sponge was then removed for microscopic examination. No discomfort was felt by the patient, though before the rays for over an hour.

# THE LANCET

## THE PHARMACEUTICAL ASSOCIATION OF MANITOBA

The report of the late convention held in this city by the Pharmaceutical Association of Manitoba will be read with a good deal of interest. The closer the affinity between prescriber and dispenser is drawn, the better for both, and, paradoxical though it may appear, the stricter the line of demarcation is observed, the sounder will be their progress. The Pharmacists of the American continent have hitherto occupied a similar position to that which the retail chemist holds across the Atlantic. But the throes of ambition, to be in every way commended and encouraged, are urging the practitioners of this art in the Western world to take a higher position in the social scale, and many of the ideas put forward at the late convention will commend themselves. The recognition, that a sound preliminary education, before entering on the special study of Pharmacy, is of primary importance, will meet with general approval, as well as the remark of one gentleman, who read a paper at the meeting, as to the position and conduct of the dispenser to the prescriber. As regards preliminary education, the requirement of a university stamp can hardly be entertained. In fact, the affiliation scheme of colleges with a university which grants a degree in any of the professions, without that of Arts being first obtained, is to be deprecated. In a young country, and in the establishing of a university often under very considerable difficulties, much lax method of procedure may be absolutely necessary, and it is therefore tolerated. But at the earliest moment the university is able, it should adopt the time-honored customs of those institutions of the Old World, whose proceedings are the outcome of experience and are hallowed by the hand of time. Divinity and Law, with few exceptions, require from their candidates an Arts degree before the final respective examinations, and there can be little doubt that the trend of professional opinion is, that no man shall be admitted to the Profession of Medicine until he has obtained this indispensable qualification. The intelligent practice of medicine requires a more extended general education than do either of the others. A divine may be foremost in his calling and yet entirely ignorant of medical lore. A luminary of the law may attain to the wool sack, and yet be an infant in the knowledge of our art. But it is expected that the physician can take his part in theological controversy, and it is essential for him to have much more than a superficial knowledge of forensic law, besides that wide field which is now embraced in the practice of medicine over which he is required to be a proficient. Such a preliminary training it would be unreasonable to expect from the Pharmaceutist, whose education, however, should be all that is called for, and this should be completed prior to his special studies. We are told, and we can well understand it, that the Pharmacist in country districts, oftentimes sparsely settled, and for that matter, in crowded centres, is compelled, so as to make a living, to combine his special work with the vending of various articles which time and custom would seem to have given the Chemist a prescriptive right to sell. But in the selling of which he is now placed in active competition with the various other stores and shops, who have entered on his hitherto preserves. There can be no question that as a rule these articles can be obtained of a better quality from Chemists, who are familiar by education with them, than of the storekeeper, who takes them on the recommendation of a traveller. The trade mark here comes in, and as the dictionaries define the meaning of the word Profession as "not mercantile, not a trade," here would be a first obstacle to the professional idea. But in this socialistic age, when money makes the man, and the possession, not the manner in which it was acquired, is what the world cares about, does not the pro-

fessional idea seem somewhat of a sentimental one? Let the Pharmacists of the present take such measures that the Pharmacist of the future must necessarily be an intelligent, well-educated man, and, though he may not see the calling recognized as a profession, the first essential step will have been taken towards it. Meanwhile, by all and every means let Pharmacists encourage that friendly feeling and mutual respect between themselves and the Practitioners of Medicine their interests are closely connected. Let them enact such by-laws as will give their executives control over the habitually prescribing Chemist, who, under the guise of a Pharmacist, performs both medical and surgical work, and thus remove one important, though we must, in justice, add, comparatively rare cause of friction. But the world of to-day is apt to judge the ninety-and-nine just men by the sins of the hundredth, who casts his unclean shadow on his deserving brethren.

# MISCELLANEOUS

## ADENOIDS AS THE CAUSE OF DEAF-MUTISM.

Sendziak, of Warsaw (Journal of Laryngology), has an interesting article upon this subject. He quotes from many authors, besides giving his own experience. The number of deaf mutes affected by adenoids, reported by these observers, runs from fifty-eight to seventy-four per cent. of the total number affected. Wilhelm Meyer, the discoverer of nasopharnygeal adenoids, gives the rate at 74.8 per cent.

In striking contrast to this condition is the comparative immunity of healthy children from adenoid enlargement. Meyer himself says that only one per cent. of otherwise perfectly healthy children have adenoids, while other reliable authorities gradually ascend the scale, the highest being being only thirteen per cent. The immense difference between the two conditions cannot be merely a coincidence.

The cause of the deafness in most cases is the closure of the eustachian tube, produced by the pressure of the adenoid growth, the result being absorption of the air within the middle ear, and the consequent collapse of the drum membrane upon the ossicles. In other instances, the results of the obstruction are directly inflammatory, commencing in the eustachian tube and extending to the middle ear.

In regard to treatment, as many cases have been recorded where ablation of the adenoids has cured the deafness, and been followed by the acquirement of speech, the importance of radical treatment in all cases is insisted upon. The method of operation must be decided by the operator himself. Sendziak uses Jurasz forceps; Gottstein curettes, and the finger nail, singly or combined as required, disinfection being considered an essential factor. As a preventive measure, wherever adenoids exist to an extent sufficient to interfere with normal nasal rspiration, they should be removed. Early age and delicate health are neither of them contradictions.

Goure (These de Paris, No. 175) in an article upon adenoid vegetations and their bacilli, makes the statement that "Operations for their removal should be complete, as remnants left do not atrophy."—Canadian Practitioner.

## PHYSIOLOGICAL ALBUMINURIA AND THE BICYCLE.

It seems from certain observations made by Muller (Munchener medicinische Wochenschrift, 1896, No. 48; Centralblatt fur innere Medicin, July 3, 1897), that in many instances the exercise of bicycling gives rise to an albuminuria that cannot be distinguished with the microscope from that of genuine kidney disease, but one that must be looked upon as physiological, since it disappears within a few days after the cessation of the exertion, leaving absolutely no signs of disease. Muller's observations were made on twelve bicyclists, eight of whom he calls trained and four untrained. Among the eight

trained wheelmen there was only one whose urine contained albumin before the exercise, but after it the urine was albuminous in seven. In six of them, including the one whose urine was free from albumin, there were at the same time present in the urine casts in numbers as great as are generally met with in acute or chronic parenchymatous nephritis; and the two others had a few hyaline casts. Most of the casts were hyaline; the minority showed distinct renal epithelia and were granular. Free renal epithelia were found in every instance. White blood-corpuscles appeared sparingly, but red corpuscles were not met with at all. Among the four untrained wheelmen, in all of whom the urine was free from albumin bfore the exercise, two showed albuminuria and one cylindruria after riding from an hour and a half to three hours.

## AMONG THE WONDERS OF VITAL ENDURANCE.

The Fort Wayne Medical Journal-Magazine contains an account of an extraordinary case, by Dr. J. M. Wilson, of Plymouth, Ind. In 1866 a man was struck upon the chest by a piece of chain hurled with great force. On examination a large ragged opening was found through the chest wall at the first intercostal above the right nipple, supposed to have been made by a broken link, through which air passed in both directions, during the act of respiration. After a marvellous rally, and four months of great suffering and danger, the man recovered sufficiently to be about, and actually lived thirty years, or until Feb. 8, 1897, with three chain links in his chest, imbedded in a hard mass of cicatricial tissue, back of the lungs, where they were found at the autopsy. The Rontgen ray could have disclosed them sooner, and to better purpose. Cough, shortness of breath and pain through the lungs had been constant symptoms, and at intervals of years he would have acute attacks of inflammation followed by lung abscesses and hemorrhages, the last attack resulting in death from hemoptysis. At the autopsy on removing the sternum, including the costal cartilages, everything was found to be adhered together and both lungs firmly fixed to the chest walls at all points, and to the diaphragm which was also firmly adhered to the liver, this latter organ being much enlarged. With much difficulty the lungs were detached, and on reaching a point on the posterior wall of the chest, directly opposite to the place of entrance and two inches to the right of the spinal column, the three chain links were found imbedded in a mass of hard cicatricial tissue that almost resisted the knife. The length of a link measured one and one-fourth inches. The course taken by the links, known by a line of cicatricial tissue through the lungs, was upward and backward to the chest wall, and then downward by the force of gravity to the final location. The lower lobe of the left lung was the only portion resembling lung tissue, owing to the disorganized condition of both lungs in various stages of disintegration from hard cicatricial tissue, lung abscesses and hepatization of right, and a congestion of the upper lobe of the left lung.

## PURITY OF WATER.

The hygienic importance of pure water for domestic use is yearly more universally recognized. Until recently the only available test of its purity was by chemical analysis. This determines its pollution with organic matter, animal or vegetable, but does not reveal the extent to which such polluted matter may communicate infectious diseases when used for drinking purposes. Bacteriology has, however, made great advances, and we are now able to ascertain the number and species of bacteria and detect the presence of the specific micro-organisms of contagious diseases in water. Water chemically analyzed before and after filtration through sand, shows but slight differentiation in the respective proportions of dissolved organic matter, whilst the same water tested by means of bac-

teriological methods reveals an enormous difference between the filtered and unfiltered states. Water in wells and reservoirs, after having filtered through earthy strata, may contain but a small number of micro-organisms; but chemical analysis may reveal the presence of nitrates taken up by the water in passing through more or less extensive strata impregnated with animal refuse. This may not render the water essentially impure, but it must be borne in mind that any accident, such as the opening of a fissure in the ground or heavy floods, may render it liable to receive pollution in excess. In short, neither chemical nor bacteriological investigations should be relied upon solely, but the two should be taken in conjunction.

## METHYLENE BLUE IN THE DIAGNOSIS OF RENAL PERMEABILITY.

At a recent meeting of the Societie medicale des hospitaux, a report of which is published in the Journal des practiciens for June 26th, M. Achard stated that he had gathered fifty new observations and performed eighteen autopsies which confirmed the results previously obtained by him. In twenty-two cases of normal eliminaton of methylene blue he had always verified the integrity of the kidneys at the autopsy. Of twenty-eight cases of tardy elimination, thirteen had shown renal lesions at the autopsy.

It was not only to medicine, properly so called, he said, that the test of methylene blue might furnish useful results, but also to surgery, by indicating if the kidneys were performing their functions in a normal manner. He cited an interesting case which had come under Dr. Schwartz's observation as a remarkable demonstration. In this case the patient was suffering from nephrydrosis, and catheterism of the ureters enabled the physician to collect the urine from each kidney separately. It was ascertained that the methylene blue did not pass through the kidney of the diseased side, but later on through what had been considered the healthy kidney, the urine of which, moreover, contained traces of albumin.

Concerning the therapeutical effects, due to the action of the methylene blue on the albuminuria, ordinarily there were none.

M. Hirtz stated that he had employed this drug six times in cases of albuminuria without any appreciable benefit. M. Chantemesse had given from twelve to fifteen grains a day with no result.

## GONORRHEA AS A CAUSE OF STERILITY.

In the Centralblattfur Gynakologie for July 3rd there is an abstract of an article by Dr. B. Vedeler, published in the Norsk Magazin for Lagevidensken in 1885. Vedeler analyzed the cases of three hundred and ten women who had been married at least a year without becoming pregnant. Seventy-two of them had been married ten years or over, and the rest three years on an average. He examined fifty of these women's husbands, and found that thirty-eight of them had had gonorrhea and thirty-four of them had infected their wives. He infers that, in the whole number of husbands, there must have been two hundred and thirty-five who had had gonorrhea, and that two hundred and ten of them must have infected their wives. He regards this inference as supported by the fact that in a hundred and ninety-eight of the women he had found the same inflammatory lesions.

## SUNSHINE.

Scientists tell us that sunshine is one of the best microbe killers and consumption curers. Dr. Strolker, Iowa State Veterinarian, discovered on his trips through that State that those cattle stalled nearest the light were freest from disease. This is a good point for dairymen to remember when overhauling the barn or building a new one, i. e., put in more windows on the south side and have the stable so arranged that the cows may receive sunshine.—Exchange.

## THE INFLUENCE OF THE RONTGEN RAYS ON THE EYE.

At a recent meeting of the Paris Societie de medecine et de chorurgie pratiques (Presse medicale, June 30th), M. Bardet, who had been much occupied with Rontgen-ray examinations, reported that he had suffered with impaired vision accompanied by scotomata, and that M. Meyer, whom he had consulted, had observed in both eyes traces of extravasation and a congested state of the retina, which he attributed to the action of the rays.

## INHALATION OF FORMALIN FOR CATARRH.

J. LardnerGreen (Brit. Med. Jour.), after accepting the theory of the presence of micrococci in all catarrhal affections, advocates as the most rational treatment the use of germicidal remedies; and as the most direct method, the careful inhalation of these remedies, either in the form of gas or vapor. He says the best results have been from the vapor of formalin, one or two drops being placed inside a Jeffrey's respirator. If the disease is in the acute stage, one drop will suffice at a time. He strongly advises a trial of formalin in the early stages of tuberculosis of the lungs. It will usually be found under the microscope that the number of both the micrococcus pneumoniac and also of the bacillus tuberculosis which is constantly to be found in the sputum will be rapidly lessened. Of course every subsidiary aid, in the way of tonic medicines, judicious diet, and hygiene, require to be carefully attended to.

## THE SPITTING NUISANCE.

It is reported that the City Council of Springfield, Mass., has passed an ordinance prohibiting spitting upon the sidewalks. As we noted last week, a beginning has at last been made in this city in the enforcement of the rule against spitting, the notices of which for so long afforded amusement to the street car conductors and elevated railroad guards. The "Medical News" says that a well-known Chicago lawyer, of prominent social and political position, has been arrested for expectorating in a street car. He threatens to sue the company for $50,000 damages. "The Sanitarian" says that among the suggestions made at St. Louis, on account of the difficulty in the enforcement of the order of the health department against spitting on the floors of cars, one is that a few cars be run over the lines with the placard "spitters' cars" on their sides.—Medical Record.

## MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The next meeting of the Mississippi Valley Medical Association will be held in Louisville, on October 5, 6, 7 and 8, 1897. All railroads will offer reduced rates. The president, Dr. Thos. Hunt Stucy, and the Chairman of the Committee of Arrangements, Dr. H. Horace Grant, promise that the meeting will be the most successful in the history of the Association, and this promise is warranted by the well-known hospitality of Louisville and Kentucky doctors. Titles of papers should be sent to the secretary, Dr. H. W. Loeb, 3559, Olive street, St. Louis.

A drawback to the bicycle hygiene, which is seldom thought of, is thus described by the Buffalo Medical Journal:—"Another series of disturbances arise from the continuous strain or tension of the rider to keep the wheel erect. The tension is not so very pronounced at any one time, but exists as long as the wheelman is astride his wheel, and the long continuance acts to disadvantage. To ride a wheel safely calls forth a double strain, a general one on the nerves and a particular one on the balancing centre. The latter strain is as injurious as the former and a long train of nervous symptoms, neurasthenic in character, is the result. The 'bicycle face' is the expression of riders who suffer from these nervous incidents."

## COCAINE A TREACHEROUS AGENT.

Dr. J. W. Crenshaw reports in the Medical World several cases in which cocaine produced unexpected and alarming effects. In one a few drops of a 4 per cent. solution of a cocaine salt were injected into a carbuncle. The patient immediately became pale and began to perspire profusely. He complained of difficulty of breathing and his pulse became threadlike. He was placed in a recumbent position, and the carbuncle was lanced without pain being experienced,and recovery followed without stimulation. In a second case a similar experience followed the injection of a few drops of the solution preparatory to opening a whitlow. In a third case a dram of a 10 per cent. solution (used, however, by mistake for a 2 per cent. solution) injected to relieve tenesmus in dysentery, produced numbness, difficulty of breathing and coldness of the extremities. The doctor says that he has been taught by these cases a valuable lesson ; that he knows of no remedy which requires more caution in its use than cocaine.

## CAUSES OF DEATH.

Prof. Snellison says that only 900 persons in 1,000,000, according to medical authority, die from old age, while, 1,200 succumb to gout, 18,400 to measles, 2,700 to apoplexy, 7,000 to erysipelas, 7,500 to consumption, 48,000 to scarlet fever, 25,000 to whooping cough,. 30,000 to typhoid and typhus, and 7,000 to rheumatism. The averages vary according to locality, but these are considered accurate as regards the population of the globe as a whole.

It is stated in the June number of the American Journal of Surgery and Gynecology that four hundred well-qualified physicians in St. Louis are practically destitute. A committee from the St.Louis Medical Society appointed to examine into the abuses of medical charity, reported that the dispensary of the St. Louis Medical College is guilty of treating free applicants who are well able to pay. This dispensary treats over 2,000 cases a week. The committee also found that the dispensary of the Missouri Medical College is the greatest offender against the well-being of the medical profession and the community in general by treating free a lareg number of patients who are well able to pay. It is also stated that many of the members of the faculties of these two colleges are upon the staffs of hospitals which employ "runners" to increase their business. It is to be hoped that the exposure by this committee will be followed by some changes for the better in the city, which, next to New York, seems to be the greatest sufferer in this regard.

"Nouveaux Remedes" describes a new ink that will write on glass, and can take the place of paper labels on bottles, etc., as it is indelible. It is made by dissolving 20 grammes of brown lacquer (not heated) in 150 cc. of commercial alcohol, and mixing this, a drop at a time, with a solution of 35 grammes of borax dissolved in 250 cc. of distilled water. It can be colored as preferred ; 1 gramme of methylen violet, for instance, will produce a handsome ink.—Medical Times.

Rosenberg, at a meeting of the Berlin Medical Society, advised the anaesthetizing of the mucous membrane of the nose with a spray of cocaine solution before the administration of chloroform. By this means anaesthesia is more readily induced, and the reflex action on the heart is prevented. Cocaine is an antidote to chloroform, and, therefore, its absorption would probably lessen the danger of the latter. Medical Record.

To prevent a black eye (Maryland Medical Journal) paint over the injured surface two or three times with a mixture of tincture of capsicum annuum and an equal bulk of mucilage and a few drops of glycerine. The coats should be repeated as soon as dry.

## SIXTY-NINTH MEETING OF THE GERMAN SOCIETY OF SCIENCE AND ARTS AT BRUNSWICK, SEPT. 20 TO 25, 1897.

At a meeting of this Society in September next there will be a sitting devoted to the question of the constitution of camphor, and it is requested that any papers or notes which any members of the profession desire to contribute may be sent in by the middle of May, so that they can be included in the official programme which is to be issued at the beginning of July. It is intended to devote Wednesday, the 22nd of September, to a general meeting of all interested in the subject of Photography as applied to scientific investigation: and Prof. H. W. Vogel, of Charlottenburg, has promised to deliver the introductory address. There will also be an exhibition of scientific photographs organized by Prof. Max Muller; contributions of papers and photographs are requested from all workers on the subject.

## FOUR HUNDRER DEGREES BELOW ZERO.

Science has at last triumphed over matter. Hydrogen, which has previously resisted all attempts to change its physical characteristics, now succumbs to the will of the noted scientist, Prof. Oiszewski, of Cracow. As early as 1883 Prof. Olszewski began the experiments in the liquefaction and solidification of gases which have resulted in the conversion of the last of the constituents of the atmosphere into liquid form. Oxygen, nitrogen, and many other gases, when submitted to low temperatures in tubes by means of liquid ethylene, boiling in vacuo, at a temperature 218 deg. below zero, Fahrenheit, were severally liquefied, but hydrogen refused to become liquid, even when submitted to a pressure of 180 atmospheres, and cooled down to 364 deg. below zero by means of liquid ethylene and liquid air boiling in vacuo. What the critical temperature of the gas was could only be conjectured, although recognized to be 364 degrees below zero. In his subsequent experiments Professor Olszewski still further lowered the temperature of hydrogen, but it was not until a few days ago that this lightest of all gasses passed from gaseous to liquid state at the low temperature of 404 deg. below zero, Fahrenheit.

## FIRE FROM NCANDESCENT LAMPS.

There is a most erroneous impression abroad regarding the incandescent light, remarked a prominent electrician. Most people have an idea that, encased in glass as it is, it cannot set fire to anything. This idea is not only without foundation, in fact, but is very dangerous. An illustration of the truth of what I say is an experience a friend of mine had the other night. He was reading by one of these incandescent lights. The glare hurt his eyes and he tied a handkerchief around the light to soften it. Shortly after doing so he had occasion to leave the room. Fortunately he was not absent long, for when he returned the handkerchief which had been tied around the light had been set a-fire, and, dropping on the table under the light had ignited a lot of papers. The papers, table and all, were blazing away merrily when he returned.—Times-Dem.

Dr. John A. Wyatt (Pittsburg Medical Review, August, 1895) believes that a paste composed of:—

Arsenious acid .....2 drachms
Powdered acacia ..... 1 dracham
Cocaine muriate .....18 grains. M.

is to be preferred to the knife in the treatment of superficial epitheliomata. The above mixture is made into a paste by adding water just before it is to be used, and should be of the consistency of a rich cream, and applied to the wound on a small piece of cloth, and left on from eighteen to thirty-six hours. The application may be repeated, if necessary, and the strength of the paste may be decreased one-half in arsenic and one-third in cocaine.

## CORRESPONDENCE

For centuries past Cod Liver Oil (ol. Jecoris Aselli) has been an important factor in the treatment of various diseases, but has only within a few years attracted the general notice of the profession. It has been much lauded in Europe, particularly in Germany and Switzerland, as a remedy in chronic gouty and rheumatic affections, chronic cutaneous eruptions, chronic pectoral complaints, etc. It has also come into extensive use in England and this country, and is now deemed by many practitioners one of the most efficient remedies for scrofula and phthisis. Although upheld for its medicinal value by many, it has been relegated by others. Not alone had its nauseating tendency the source for the latter, but many practitioners have doubted its efficacy, while others found it the most reliable agent. This diversity of opinion has led up to many experiments and researches of chemists and microscopists of both hemispheres to determine the cause of the efficacy of Cod Liver Oil. From time to time scientific reports have appeared in the various medical journals and textbooks, each differing from the other: but undisputed now stand the reports of Armande Gautier, Professor of the Faculty of Medicine, Paris and Prof. L. Mourges, assistant to Pro. A. Gautier entitled "The Alkaloids of the Oil of the Liver of the Cod." On careful and scientific experiments, based upon researches thus made, Wampole's Preparation of the Extract of Cod Liver Oil originated, and has been able to maintain its position as a remedial agent for years past, and its present popularity certainly has not resulted from any lack of sharp and sustained controversy. In this preparation we place within reach of the practitioner of medicine a combination of the active principles obtained from one-fourth its volume of Pure Cod Liver Oil, the oily or fatty portion being entirely eliminated, thus producing a preparation of an agreeable taste, causing no unpleasant digestive disturbances and eructations so characteristic of the raw oil. This being a new departure, in as far as Cod Liver Oil preparations are concerned, it has naturally met vigorous opposition from the manufacturers of emulsions containing the nauseating fat peculiar to the liver of the Gadus morrhua; but the latter, being unsuccessful on this issue, have even attempted to ridicule the work of those scientists who with absolute proofs combated the old-time theories. Highly-colored and loud-speaking advertisements not only fill the advertising pages of our medical journals, but also novels, periodicals, etc.; advertisements of emulsions of unknown strength, which easily separate and are often rancid; preparations containing the whole oil, in definite and unvarying quantity; bought-up testimonials, etc. It is but necessary for the intrepid and conscientious physician to read the various writings on Cod Liver Oil as they appear occasionally in different journals to know that the writer was either a paid tributary to certain manufacturers or was too egotistical to accept newer and more advanced theories of scientists of undoubted authority.

Points are raised that Cod Liver Oil owes its efficacy to the fat it contains and that our theory is substituting a part of the whole, illustrating this with an argument thus worded: A mineral water would not do the same amount of good if its various constituents were extracted and administered separately.* The point of this argument does in no way meet the one held out by Professors Gauties and Mourgues. It is but natural that, should the alkaloidal salts be extracted from mineral water, the water in itself would have no properties; but we claim that the administration of the salts extracted will bring the same results as the mineral water in its natural form—for example, Carlsbad water and the imported Carlsbad salt. Our argument offsets all others, as the therapeutic results attending the administration of the extracts of Cod Liver Oil furnish incontestible proofs in favor of their medicinal value. Such evidence as discoverd by Gauties and

Mourgues, confirmed by Bouillot, Germain See, Dujardin Beaumetz, Ippolitoff, Patein, Von Mering, and others, outweighs all that may be offered to the contrary.

The claims we make for Wampole's Preparation of the Extract of Cod Liver Oil is based upon the researches made by the above enumerated scientists, a summary of which will be reproduced in the pages, entitled "The Alkaloids of the Oil of the Liver of the Cod," by Armande Gautier and L. Mourgues.

HENRY K. WAMPOLE & CO.,
Manufacturing Chemists,
441 Green St., Philadelphia, Pa.

## LIBRARY TABLE

"Water and Public Health; The Relative Purity of Waters from Different Sources." By James H. Fuertes, Member of the American Society of Civil Engineers. First Edition. First thousand. New York: John Wiley & Sons. London: Chapman & Hall, Ltd. 1887. Pp. x–75. 12mo., Ill.

In this little volume the author has grouped the principal cities of the world into classes according to the quality of their public water supplies, and has made a comparative study of their mortality statistics. This staistical method of treatment make the importance of pure water stand out in bold relief.

The author admits the uncertainty resulting from incorrect reports of health boards and physicians, as well as from unreliable figures of population; but he assumes that "in all large cities these causes of error are perhaps equal," and the inaccuracies will counterbalance so as not to seriously influence the general deductions that may be drawn.

The four chapters of the book are entitued :—I. Etiology and Prohylaxis of Typhoid Fever. II. When does Pure Water pay? III. Sanitary Value of Impounded and other supplies. IV. Conclusion. Following this are four Appendices, containing much statistical information.

The work is illustrated by no less than seventy diagrams, showing in a graphic way the relations of pure water to foul water to public health in a large number of cities in Europe and America.

The author's conclusions are those of a common-sense view of the subject, based upon the facts presented.

It is surprisng to learn that the important commercial city of Baltimore, having a population of 435,000, "has as yet no sewerage," and "the house-drainage is disposed of largely into cesspools and outhouses."

The author discusses the outbreaks of cholera and typhoid fever in Hamburgh, Germany, and it is truly appalling to read thes terrible figures of mortality in that unhappy city during the epidemic years.

The author believes that "properly designed and operated filters may be relied upon to purify any waters at present used for a public water supply in the United States."

In Chapter II the author treats of the question "When does pure water pay?" and discusses in a cold-blooded way the economic value of an individual to the community, and the amount of money which the community is authorized to expend to accomplish a reduction in the death-rate. He finds that the "community can afford to invest about three thousand dollars for every death forefended."

The Index to the volume is unusually full.

## TO MANUFACTURERS

**All manufacturers who are readers of "The Manitoba and West Canada Lancet" are requested to mail one of their more recent catalogues to the American Catalogue Bureau, Cleveland Ohio. It is the intention of this bureau to open free business libraries in several of the more important cities of this country and abroad, and by complying with the above request, our readers will not only benefit themselves but assist in imparting some valuable information.**

## PHARMACEUTICAL ASSOCIATION

The following papers were read at the first annual convention, held in Winnipeg, Friday, 23rd August, 1897:

### A REVIEW OF CHEMISTRY FOR SIXTY YEARS.

By C. Flexon, President of the Association.

In contemplating the subject of a paper to read before the members of the Pharmaceutical Association of Manitoba, it was with many misgivings that I undertook to outline a review of chemistry embracing the 60 years of our Majesty's reign—a reign as renowned for its illustrious men of British blood and magnificent deeds, as it has been for its remarkable length. Should there be any wonder that the recent congratulations of the civilized world were so richly bestowed on the commemoration of the greatest historical event of our times?

A search for the causes of the high standard of chemistry among the sciences of to-day, or to trace the progress of science generally throughout th Victorian era would occupy too much of our time. We shall, however, be aided in the estimate of our subject at the outset by a rapid glance at the social conditions of Her Majesty's subjects in 1837, and contrasting them with the well-known comforts of the people in the present year. Are we not forced to admit the foremost and most important factors to be the marvellous improvements in the panorama of locomotion, and the binding together of the nations by electricity? Those are the factors, as a great writer has said, which "diminish local ignorance and prejudice, and create common interests among the most widely separated people." Modern progress, indeed, is but a history of contrasts. We cannot talk of comparisons with the past. Think for a moment of the old methods of travelling either by land or water 50 or 60 years ago. In fact, nobody would be so bold as to deny the astonishing achievements of mankind in these days, to be the products of rapid transit, and of that unknown agent which we have named electricity. Daily and hourly intercommunication of thought throughout the world has resulted in competition among the nations, and markedly so among the eminent minds of the nations. No sooner is a discovery made than it is heralded abroad before the setting of the sun. Our imaginations fail in predicting what will follow from all the vast enterprise known to us. One thing certain is, that chemistry has kept pace in the struggle with the other sciences, and there are reasons to suppose will ultmately secure the most prominent position in the ranks of the world's triumphant march towards the goal of earthly bliss.

To form anything like a conception of the present status of chemistry, we should start by peeping into a document in the Chinese historical records, dated 4,000 years ago, which mentions the elements as earth, fire, metal, and wood. Then, skipping over the next 2,000 years, we reach the school of Aristotle, which considered the elements as dry or humid, warm or cold, light or heavy. The modern view of the elements is not exactly like that of our immortal sage. The properties of substances in those times were soleiy physical, chemical properties did not dawn upon men's minds. The Hindoo considered the elements as earth, fire, water and ether, and those ideas soon invaded Europe. The next stage of our journey finds us perhaps in the more chaotic age of alchemy, when astronomy and magic held the unmolested reigns of power; but whether for good or evil, it is none the less true that in the contentions and confusions of the alchemists there were born the problems "which science is still engaged in solving." Time will not permit us to speak of the cosmogonies and philosophies, the sacred art of the alchemy of the middle ages, and of Paracelsus and his influence, and the subsequent overthrow of the Paracelsian doctrine by Van Helmont, and the inauguration of the great work of Robert Boyle. We must pass on to consider the more

decided and more illustrious work of a few men within our scope. In its introduction during the latter part of the 18th century, and the first ten years of the present, modern chemistry was applied to no practical purpose, and it cannot be said of the great scientists of that period that they had in view the betterment of mankind, in the sense that we would speak of our chemists and their synthetic work of to-day. Priestley, who was born in the small Hamlet of Fieldhead in the year 1733, "a man so various, that he seemed to be, not one, but all mankind's epitome," published over 100 works, embracing politics, theology, philosophy, chemistry, and other subjects. One of his well-known works is the "Doctrine of Phlogiston Established." His laborious investigations of gaseous bodies earned him the title of the father of pneumatic chemistry—he having devised the well-known pneumatic trough, and with it experimented with fixed air known to us as carbon dioxide or carbonic acid. He observed that the gas conferred "a pleasant acidulous taste on water." Priestly, you see, "suggests the idea of the manufacture of soda water," a beverage says Mr. Huxley, "to naturally and still more to artificially thirsty souls, which those whose parched throats and hot heads are cooled by morning draughts of that beverage, cannot too gratefully acknowledge." He was much absorbed in experimenting with inflammable air as if was then called, but now known as hydrogen, and he says that "phlogiston is the same thing as inflammable air, and is contained in a combined state in metals just as fixed air is contained in chalk and the other calcareous substances, both being equally capable of being expelled again in the form of air." We are indebted to him for nitric oxide, to which he gave the name of nitrous air, and for vitriolic acid air, now called sulphur dioxide. Also fluoride of silicon, nitrous oxide, and last, but not least, for the discovery of dephlogisticated air. It required, however, the eminent French chemist Lavoisier, whose powerful arguments dealt a death blow to the Phlogiston doctrine to assign the name oxygen to that gas. It is remarkable that at a time when this same Frenchman reigned supreme in the realm of chemistry in his own country, Cavendish, of equal renown, held full sway in England, though they represented two distinct schools. Both were men of great wealth. To the honor of England be it said that though her great countryman lived as a hermit in the pursuit of his immortal work, cold and indifferent as he ever was to the social progress of his fellow people, the close of his long life of 50 years was deeply regretted, and his burial was marked with the utmost respect. But, alas, for our popular and generous Lavoisier, the founder of modern chemistry. At the age of 51, in the days of the "Great Terror," his country led him to the guillotine. A greater martyr or a more illustrious man has not been found. The world became indebted to him as the inventor of the gasometer, and to a great extent for the calorimeter, though in this he received the assistance of his coadjutor, Laplace. His experiments were numerous and marvellous. History will not support the claim of Bertholet, the eminent French chemist, that Lavoisier was the discover of the composition of water. Long and bitter as the water controversy was, there is no doubt in the minds of English historians that Cavendish was the first to prove the non-elemental nature of water. Professor Thorpe says, in 1781 Cavendish discovered that "a mixture of two vols. of inflammable air (the gas now called hydrogen) with one vol. of the dephogisticated air of Priestley, combined together under the influence of the electric spark to form the same weight of water," and the professor further on nobly remarks "that the honor of our ancestors is in our keeping, and we should be unworthy of our heritage and false to our heart if we were slow to resent or slack to repel any attempt to rob them of that glory which is their just right, and our proud boast." We shall always cherish a warm regard for the Swedish chemist Scheele, a con-

temporary of Priestley and Cavendish and the discoverer of tartaric, benzoic, molybdic, lactic, muric, oxalic, malic and gallic acids, chlorine and glycerine. The first decade of this century was indeed an auspicious one for chemistry. In 1804, when Emperor Napoleon and Josephine were crowned by the Pope, and Spain declared war against Great Britain, Dalton communicated his atomic theory, and four years later, when he published his "New System of Chemical Philosophy," Gay Lussac came forward with the laws of the combinations of gases by volume, and three years still later Avogudro with his hypothesis that equal volumes of any gas contain the same number of atoms. The names of Dalton and Avogudro are as familiar to the pharmaceutical students of the world as are their own fathers. Fast and important friends as those philosophers have always been, and will continue to be to the weary student, I believe they have been the cause of much profanity. Another immense service rendered by Dalton, in the words of Huxley, "as a corollary of the new atomic doctrine, was the creation of a system of symbolic notation, which not only made the nature of chemical compounds and processes easily intelligible and easy of recollection, but by its very form suggested new lines of enquiry. The atomic notation was as serviceable to chemistry as the binomial nomenclature of Linneus was to zoology and botany." On Dalton's foundation chemistry has erected a mighty monument of possibilities. To that doctrine, indeed, is due the great advance of chemical knowledge in recent times. But for that doctrine synthetical chemistry would have been denied us. The artificial productions of substances or active principles which were formerly regarded as belonging only to plants and animals, and in the changes produced after death are truly the productions of the Victorian era.. Methods now are numerous for the synthesis of urea and uric acid. We find chemistry engaged on an extended scale in supplying the human race, for instance, with caffeine, tartaric and citric acids, conine, antropine, oil of Bitter almonds, oil of mustard, salicylic acid, vanillan and the sugars dextrose and levulose. The non-poisonous animal alkaloid "choline," originally found in bile and in the yoke of an egg, can now be made, as can also the poisonous "neurine," a derivative of brain substance. One of the great bases for synthetical work is coal tar. The artificial production of "alizarin," a derivative from coal tar was due to two Germans; but the dye stuff "aniline violet" was patented in 1858 by Perkins, a Britisher, and from that year we must date the rise of the production of coal tar colors, which is now an enormous chemical industry, giving employment to hundreds of thousands of our fellow creatures. Indigo has also been produced by synthesis; but the process is too expensive to manufacture that important dye commercially. Chemists, however, do not despair of simplifying the process, and so the world is awaiting the inception of another industry. Intensely interesting as organic chemistry is in its wonderful complexity, and has ever been since the work of Berzelius in 1814, and Liebig and Wohler in 1832, and Dumas in 1837, much more delightful must it be to work at the boundless problems of organic synthesis, and at which the chemists of to-day are devoting their energies. To quote a passage from a valuable article on the theory of Professor Bertholet by Henry Dam, in McClure's Magazine of September, 1894:—

"Wheat fields and corn fields are to disappear from the face of the earth; because flour and meal will no longer be grown, but made. Herds of cattle, flocks of sheep, and droves of swine will cease to be bred: because beef, mutton and pork will be manufactured direct from the elements. Fruits and flowers will doubtless continue to be grown as cheap decorative luxuries; but no longer as necessities of food or ornament. Coal will no longer be dug, except perhaps with the object of transforming it into bread or meat. The engines of the great food factories will be driven not by artificial combustion, but by the underlying heat of the globe. In

order to clearly conceive these impending changes, it must be remembered that milk, eggs, flour, meat and indeed all edibles consist almost entirely of carbon, hydrogen, oxygen and nitrogen. Oxygen and hydrogen are the two gases which, when combined, form water. Oxygen and nitrogen mixed are the air we breathe. Carbon forms the charcoal of wood, is the main constituent of coal, and as carbonic acid gas in the air is the chief food of the vegetable world. These four elements, universally existing, are destined to furnish all the food now grown by nature, through the rapid and steady advance of synthetic chemistry." To make proper reference to the brilliant and monumental researches of Mendeleeff, the Sibtrian philosopher and the living idol of chemists throughout the world, would make this paper too lengthy. We know him through his great work on the "Principles of Chemistry," in which he has given us the Periodic Law. In his famous lecture, delivered before the Fellows of the Chemical Society in the theatre of the Royal Institution, on Tuesday, June 4th, 1889, he announced the propositions of that law as follows :—(1) The elements if arranged according to their atomic weights, exhibit an even periodicity of properties ; (2) Elements which are similar as regards their chemical properties, have atomic weights which are either of nearly the same value (e.g. platinum, iridium, osinium), or which increase regularly (e.g. potassium, rubidium, caesium) : (3) The arrangement of the elements, or of groups of elements, in the order of their atomic weights, corresponds to their so-called valencies as well as to some extent to their distinctive chemical properties, as is apparent among other series in that of lithium,, beryllium, barium, carbon, nitrogen, oxygen and iron ; (4) The elements which are the most widely diffused have small atomic weights ; (5) The magnitude of the atomic weight determines the character of the element, just as the magnitude of the molecule determines the character of a compound ; (6) We must expect the discovery of many yet unknown elements, for example, elements analogous to aluminium and silicon, whose atomic weight would be between 65 and 70 ; (7) The atomic weight of an element may sometimes be amended by a knowledge of those of the contiguous elements. Thus, the atomic weight of tellurium must lie between 123 and 126, and cannot be 128. |8) Certain characteristic properties of the elements can be foretold from their atomic weights.

In the words of Britain's great philosopher, Herbert Spencer, "a knowledge of chemistry concerns every one, who is directly or indirectly connected with our industries. Glance through a work on technology, and it becomes at once apparent that there is now scarcely any process in the arts or manufactures over some part of which chemistry does not preside."

A cursory review, such as this paper contains, can give but a superficial knowledge of what has been effected in the world of chemistry. Regarding the accomplishments herein mentioned of a few, out of a multitude of great men, past and present, we can but wonder what the ultimate results will be. Men of the pharmaceutical profession, no matter where they be found, and trained as they are in this grand science, cannot be expected to hope for much recognition. Much as pharmaceutical chemists may try to emulate such men of whom we have read, they are debarred, just so long as seclusion is denied them from the petty worries and trials of the drug trade, in which they are engaged. As much abuse as you like can be levied against the professors of pharmaceutical colleges, in spite of some bright stars of budding brilliancy which they turn out, still the unwelcome feature of vain plodding for a brighter future dominates every business of a chemist and druggist, and must continue thus, until an esprit de corps shall pervade and take deep root within the Pharmaceutical Associations, not only of this continent, but of the entire world.

## PHARMACEUTICAL TRAINING AND EDUCATION.

By W. A. B. Hutton, Lecturer to the Association.

Sixteen years is probably about the average (and in my opinion should be the minimum) age at which a boy enters a drug store for the purpose of learning a combination of a business and a profession, the qualifications which make for success in which are, in very many respects, decidedly unique. He is expected as a rule to do the work of a character required to be done by a grocer's or a butcher's boy; yet he is supposed to have an education above the average and has to enter badly handicaped on a lengthy course of study. His hours are necessarily long—the early closing by-laws are not for him — even on Sundays and holidays his stint is demanded of him. I have said he is supposed to have an education above the average, and so he would if a thorough knowledge of the work laid down in the curriculum of the Association were demanded of him. If a high standard of pharmaceutical education is to obtain in Manitoba the beginning must be made by requiring proper qualification on the part of the candidate before registering him as a certified apprentice. If before being allowed to start his pharmaceutical training he is compelled to pass his examination, and such a one as shall prove that he really has been studying, not merely cramming for a few weeks, it will go far towards securing a student possessed of a grounded habit of study. Unless he does possess this habit we all know what happens when his evening off comes. Then his mind naturally does not turn to study and if from a sense of duty he overcomes his desire to go out and amuse himself, and instead takes down his books, the chances are that he will do a little desultory reading and after becoming thoroughly muddled, either go to sleep or start in on something more congenial to his taste. The total result being unmethodical and spasmodic efforts not to learn but to get together sufficient scraps of knowledge to enable him to get through his examination somehow.

That in the past our certified apprentice has not had the qualifications which he should possess I am quite confident and I am sure that examiners of the Association will agree with me that there has been abundant evidence in the papers they have examined in the shape of spelling which sometimes could not even be classified as phonetic—the lack of ability to express himself intelligently, and as for his arithmetic, a question involving only a rudimentary knowledge of mathematics, has seemd to produce profound cerebral inertia.

The Council of the Association require that he shall pass a satisfactory examination on physics.' During my experience as a teacher I have repeatedly found that his ideas about the simplest natural phenomenon were of the vaguest character—even the rise and fall of the barometer has been as Greek to him.

Th question is how to remedy this state of affairs. I have already indicated the cause and I am satisfied that if the members of the Association refused to have a boy in the store until he had passed his examination it would in the end be better for all concerned.

I have heard it urged that if the standard of entrance were raised there would be a difficulty, particularly in country districts, in obtaining apprentices. Surely this must be a mistake. If for a moment you consider the very large number of students attending the high school and university to-day and the overcrowding of the professions, you cannot believe it posible that difficulty will be met with in obtaining boys with fair education to recruit your ranks.

I will not dwell longer on this part of the subject for I have a few words to say with reference to the course of the apprentice after starting on his work proper. Supposing him to be equipped with a good preliminary education, how best can he make use of his time? At the start his work is anything but interesting and often decidedly menial, but necessary

that he may be taught obedience, care and cleanliness. Here at the very beginning his employer can do much to make or mar his future success. If he is treated as an errand boy and as rather a necessary nuisance and provided he accomplishes more or less satisfactorily the tasks set before him, is let severely alone then indeed, he is to be pitied, and a very crude product will be the result.

If on the contrary, he shows a willingness to work and to learn, and his employer takes an interest in him and sees that he is enabled to devote say an hour a day in directed study. If he is fortunate enough to be in a store where the tinctures are not all made from fluid extracts and where as many as posible of the galenical preparations are made on the premises, and where the various steps in their manufacture are explained to him. If the prescriptions received at that store are written by medical men who think for themselves when they prescribe and are dispensed by the mixture of preparations he has seen made, then will that apprentice render an acount of himself of which all concerned may well feel proud, when he goes up to attend his lectures and pass (for he will) his examinations.

There are certain studies to be taken up before attending lectures, such as reading and dispensing prescriptions and more or less practical pharmacy. English weights and measures should of course be mastered, and if in addition he is familiar with the metric system he will find it of great help to him when taking his course of lectures. Until the Association is able to build and equip a suitable college students must depend chiefly on their employers for instruction in practical pharmacy and it is strongly to be hoped that members will bear this in mind.

Whether the student decides to take his lectures one course at a time or follow the minor immediately by the major, he should arrange to devote his whole time to his studies and not attempt to work in a store while preparing for examination.

The question of the advisability of leaving the lectures to the last or taking the minor course early, say just before the time he is permitted to go up for his minor examination, is open to a difference of opinion. In the latter case he should certainly be able to make better use of his time in the store, and should have a better idea what to read for his method of study will have been increasingly systematized.

Chemistry is one of the subjects giving most difficulty to the beginner, but if he has diligently studied his text book on Physics not a few of the rough places will have been made smooth for him. He should read carefully the first portions of Attfield, particularly the pages dealing with chemical philosophy, then the names, symbols and atomic weights of the chief elements used in pharmacy should occupy his attention and if his employer will occasionally question him in the time set apart for study, so that the student's progress may be judged, the results will amply justify the time and trouble spent.

There are some things which I think we are all apt to lose sight of, and one of these is, I am afraid that we have not been just as progressive as we might have been. In the East, Canada as well as the States, higher pharmaceutical education has made rapid strides of late and I am inclined to think that the inducement of a well-earned university degree is proving very attractive to a superior class of students, and the progressive influence wielded by these men will be more and more apparent, and I should not be surprised if it should prove to be not a little of an off-set to the encroachment on legitimate business by department stores and grocery-store-patent-medicine competition.

Why should not the Pharmaceutical Association of Manitoba give to her students the oportunity of obtaining a university degree, I know not. Our university has by its charter the power to grant such a degree.

There is only one real obstacle in the

way that I know of—the standard of matriculation. The university entrance examination is really but a slight advance on the one required by the Association (comparison of requirements).

If it be thought too much to compel all students to obtain a degree in order to procure a license, why not try for some arrangement similar to that which the Ontario College has? This would give two classes—Association Licentiates and University Graduates.

## THE PROBLEMS OF PHARMACY.

By John F. Howard, Winnipeg, Man.

To judge from the articles in pharmaceutical journals, the papers read at conventions, and complaints of druggists themselves, an alarming state of affairs exists in the East as far as the drug business is concerned. And really there seems to be grave grounds for these fears. With dry goods stores handling toilet articles and general sundries, grocers selling patent madicines and a large variety of drugs, medical men dispensing their own medicines, dispensaries giving away drugs without any enquiry as to the circumstances of the applicant, there will soon be no place left for the legitimate pharmacist. The place that knew him once, will know him no more, unless it be that he remain faithful to his post, performing the shadow of his former functions by furnishing a directory and a telephone for the free use of the public.

But while these are the problems with which the Eastern druggist is confronted, I am happy to state that , as yet, the Western druggist has scarcely yet been called upon to face them. However, while we have every reason to congratulate ourselves that our business has suffered few reverses in the past, this should not blind us to tne necessity of taking immediate steps to prevent in this Western country a condition of affairs which unfortunately exists in the East. That we have not been troubled in the past, is no guarantee that we shall be entirely left to ourselves in the future. It may be that when the same conditions exist in Manitoba as exist in the East at the present time, we shall be called upon to grapple with the same problems with which they are now striving. The object of this paper is to draw attention to these points in order that we may be able to consider them, and take measures to obviate these difficulties, if not entirely prevent them.

It seems to me that the best augury for the future is that up to the present time we have had very little cause for complaint. We have god reason to congratulate ourselves on the present standing of our profession and to be thankful for the continued prosperity we have enjoyed. There are several reasons for this, to some of which I would like to call your attention. In the first place let me refer to the cordial relations existing among the druggists themselves—relations of personal good-will and business confidence. In the past there has been no ruinous comptition, no cutting of prices to secure an advantage over a fellow druggist, but on all hands a feeling of sincere good-will and trust. Our profession has not been called upon to suffer on account of the action of any of its members. This I look upon as one of the most important factors in our continued prosperity. "United we stand, divided we fall," is an old saying and a trite one, but for all that none the less true. It will be an evil day for the druggists of the country should the elements of discord and mistrust be found within the ranks.

Another cause for congratulation in the past, as well as a hopeful sign for the future, is the high standard maintained by the profession in Manitoba. Our profession is one which demands the highest order of intelligence, while we have not unduly sought to be a close corporation, we have insisted on high qualifications on the part of those whom we admit to our ranks. The stand which we have taken has been justified by the results. It is an easy matter to get apprentices—and those the very best apprentices

—young men, gentlemanly and well-educated, whom we shall be pleased to welcome into our ranks when they have completed their apprenticeship. This cannot but operate for our good by increasing public respect and confidence.

But there is stil another cause for congratulation and an even more hopeful sign for the future in the continuous cordial relations between the physicians and pharmacists of the Province. That these two professions are dependent, the one upon the other, goes without saying. That the prosperity of the one means the prosperity of the other, is also true. I am hapy to say that I am not aware that there is at any point in the Province any friction between the pharmacists and the members of the medical profession. And here I would like to bear testimony to the good work accomplished in this direstion by the institution of the pharmacy lectures in connection with the Manitoba Medical College. The association of the students in pharmacy and medicine cannot but have a beneficial effect, both in the formation of acquaintances and in the mutual respect which such associations are sure to engender.

Before proceeding to the consideration of the graver problems before us,, let us consider for a moment the sale of sundries, patent medicines, etc., by grocers, dry-goods merchants and departmental stores. This, of course, is a very difficult question to deal with, and requires very careful consideration. In regard to the sale of toilet articles, etc., about the only remedy that can be recommended is to manage business on the strictest business principles. It may be that in the past the percentage of profit has been too large. If so, a reduction must be made to compete with other businesses carrying this line. Another method is to watch the wholesale houses and refuse to patronize those houses that deal with other businesses than the drug trade. This is extensively done in Eastern cities and with measurable success.

In regard to the sale of patent medicines, there is one method of prevention which it seems to me might be healthy in its effect. I have long considered this question, and in the proposed solution I am quite certain we would have the support of the most influential men in that influential body—the medical men. It is not necessary for me here to say anything about the evils of the indiscriminate use of patent medicines, the harm they do when taken into a system not in need of them, the bad effects wrought in numberless cases, Interested as the druggist is in the preservation of the public health and the prevention of disease, I do not think that we, as druggists, could do better than urge upon the government the necessity of passing an Act compelling the manufacturers of patent medicines to print on the label the formula from which the medicine is made. This is done in England in the case of all medicines containing poisonous drugs. Its advantages both to the community at large and to the druggists are obvious. Why, then, should not the operation of such an Act be extended to patent medicines and put in force in Canada ?

Within the last few years there has been growing a new industry, one scarcely heard of a decade ago, but which at the present time is assuming enormous proportions. I refer to the manufacture of elegant pharmaceutical preparations and tablet-triturates. It is to the interest of the vendors of these articles to create a mutual distrust between the doctors and the druggists, to endeavor to make the doctor believe that the druggist is working against his interests and in addition reaping profits which might as well be in the pocket of the doctor himself. This brings us back to the question of the relations between the doctor and the druggist.

Here let me deal with several charges made against the druggists as a profession by men interested in creating a breach between the pharmacist and the physician, in undermining the confidence of the latter in the former. The principal of these charges are the substitution of drugs, counter-prescribing, and the mak-

ing known to the public of a large number of ready-made preparations.

In regard to the question of substitution, it is urged by interested individuals that the druggist is in most cases, if not in all, a substitutioner, that he cannot be depended upon to dispense the drugs ordered. This charge would be absurd were it not so serious. It is a downright falsehood in every particular and a personal insult to every member of the profession. It does not become us to laud ourselves, but the interest of self-preservation must make us pause and reflect on the character of the men in our profession. I think I am safe in saying that as a class the druggists are men of more than average education, ability and integrity, men who can be depended upon to conduct their business fairly and honestly, men who enjoy the confidence of their customers and fellow-citizens as largely as any other business class in the community. Even were this not so, were the druggists men who could not be depended upon to act honestly, a little commonsense and consideration would show that the interests of the pharmacist and the physician are so closely related that the druggist in substituting would simply be defeating his own end. It is to the interest of the druggist that the physician should get the results he looks for when writing a prescription. If not he begins to ask the reason why. In my own experience I know that doctors appreciate the time spent and care taken in selecting and preparing the purest, freshest and most active drugs and pharmaceutical preparations. I am very glad, however, to state that never in Manitoba have I heard these charges made by a physician against a druggist. Our good friends the doctors may be depended upon to stand up in our favor when this contemptible charge is made against us.

The next charge is that of counter-prescribing, and in this we must admit that there is some truth. There is no doubt that counter-prescribing is done in drug-stores, but I am safe in saying that when done it is against the wishes of the druggist and forced upon him by the exigencies of the case. That it can be done away with, entirely, I very much doubt. The efforts of the druggist will have to be directed towards minimizing the number of prescriptions so given. There is no doubt in the world that the druggist is not the man to prescribe The doctor by his special knowledge is the only competent person to diagnoze a disease and prescribe the proper remedy. The druggist cheerfully admits this, but what is he to do when a customer comes into the store and complains about a head-ache or a slight indisposition and asks the druggist to suggest a remedy. The customer would not think of consulting a doctor for such a slight attack, he is able to pay a doctor, has no wish to save a fee and he asks the question without any more thought than he would have in asking a grocer to recommend some particular brand of tea, or a tailor a particular kind of cloth. In a case like this, a case in constant occurrence, what is the druggist to do? He cannot refuse to give the required information. If he does so it is set down either to ignorance or to boorishness and a good customer is lost. It would be just as reasonable to charge the physician with breach of faith in carrying a hypodermic syringe as to make a similar charge against the druggist for being compelled to answer in such a case. There will always be more or less counter-prescribing, but I would urge that the amount done be as little as possible and that it be discouraged in every way consistent with business interests.

Another serious charge against the druggist is that of a breach of confidence in making known to the public a large number of ready-made prescriptions. These are then bought in bulk, thus depriving the physician of his consultation fee. A few moments' reflection will show that this charge has no foundation. There is no use denying that this knowledge is in possession of the public, but that they obtained it through the medium of the druggist, I deny. There are several

ways in which this knowledge may have been distributed. In the first place all the more popular weekly newspapers, such as the Family Herald, Montreal Witness, etc., have medical columns, and prescribe these remedies. These papers have thousands of readers. The persons prescribed for may be benefited; he tells his friends, and so the news is spread. Again, an indiscreet physician may tell a friendly patient to purchase some Fellow's syrup or a couple of ounces ofListerine. He does so, and finding it does him good, advises his friends to use the remedy, stating that Dr. Blank recommends it. Again a very large number of these preparations are openly advertised in the newspapers, in fact, the medical journals themselves are simply swarming with such advertisements. By these means, and various others, the remedies become known and the druggist is blamed therefore without being in the least guilty.

As I said before, the manufacture of special preparations and tablet-triturates is assuming alarming proportions. These manufacturers are either wealthy men or large corporations. They have unlimited capital at their command, which they use to trade upon the weakness of humanity. By means of their immense wealth they are able to obtain the control not only over a large number of doctors, who in turn influence others, but even to subsidise, if not purchase outright, medical journals. Their preparations are advertised by means of thes journals and through the public journals. Lazy and careless physicians are induced to prescribe their medicines. The intelligent customer soon finds out that he is buying a ready-made compound. He repeats the prescription and recommends it to his friende. The mischief is done. Both physician and druggist suffer, the one in his fee, the other in his percentage of profit.

I cannot understand the actions of physicians in prescribing patent medicines and other specially prepared compounds. The medical man must surely see that he is doing himself an irreparable injury. The proprietor of these medicines is not working for the good of the physician, not even for his convenience. It is the public the manufacturer is interested in, and once his medicines are well-known to the public to the public he will go direct, and the doctor is left lamenting. It might be well also to note that the increase in the number of special preparations very largely increases the temptation to counter-dispensing.

There is a side, however, both to the tablet-triturate trade, and to that in elegant pharmaceutical specialties which is never mentioned by the vendors of these wares. The rapidity with which the tablets deteriorate and become inert is remarkable. You will notice in many instances, in comparing the tablets next the glass, with those in the centre of the bottle, that there is a material difference in the color. In addition to this many tablets become broken or rubbed, so that they vary considerably in weight. It is also contended by analytical chemists that many of the tablets do not contain the amount of active ingredients they are supposed to represent. Again, in the case of the elegant pharmaceutical preparations, very frequently the principal elegance is in the wrapper. Manufactured by machinery, mixed by inexperienced labor and produced by the hundreds of gallons, the medicines cannot be of a satisfactory nature. I have in my possession at present preparations so manufactured, that would be a disgrace to a second year apprentice. Of what use is our special preparation for the profession, of what benefit is the long and careful training we give our apprentices, if such stuff is allowed to sway? The medical man, if he wishes to obtain a result from the drugs prescribed, will never depend upon these forms of medication. If he continues to place faith in them, I am satisfied that in the hour when he is anxiously waiting the results from the medicine prescribed, he will be doomed to bitter disappointment, perhaps losing the patient, whose life he otherwise might have saved. It is the moral duty of every

physician to give this subject the serious consideration its importance deserves.

The whole effort of the tablet-triturate manufacturers seems to be directed towards dstroying the confidence of the physician in the druggist. The suave and gentlemanly agent approaches the doctor. and opens his stock before him. He sympathizes with the doctor in his efforts to relieve human suffering and shows him how, by patronizing the house he represents, he may be even more successful in his calling. He also proceeds to sympathize with him, always in the same agreeabl manner, in the way in which his efforts for the good of his patients are thwarted by the unfortunate tendency towards substitution on the part of the druggist, urges upon him the convenience of carrying his own stock of drugs and the time saved thereby, and finally draws an alluring picture of the profit he will make by acting as his own the druggist. Convinced of the perfidy and untruthfulness of the pharmacist, the physician buys from the tender-hearted drummer, the result being a direct injury to himself as well as to the druggist.

This kind of talk, however, has very little effect on the intelligent physician. Medicine is advancing with such gigantic strides, there is so much to know that men who were specialists ten years ago have been forced to become now what might be called sub-specialists. The Manitoba physician, striving as he does to keep abreast of the times, to keep in touch with the latest and best in the medical world, has no time to add a thorough working knowledge of pharmacy to his already over-burdened curriculum. Pharmacy is advancing in its line almost as rapidly as medicine. "Pharmaceutical processes are being constantly improved, and these improvements are largely dependent on a better knowledge of organic chemistry and of the constitution of drugs." "If the pharmacist finds it difficult to keep up with the latest discoveries in his own special subject, how then shall a busy physician keep himself up in these strides ?" Pharmacy is a distinct and separate business and our Manitoba physicians are wise enough to recognize this.

In summing up what I have said in this paper, let me repeat that I have not attempted to solve any of the problems specified. I have merely tried to lay these questions before you, that we may see the difficulties which may start up before us at any moment. The main point is that the physician and pharmacist must support one another. Let once the confidence existing between these two professions be impaired, and both will suffer. Each must help the other. If one branch have a grievance against the other an effort should be made by joint consultation to remedy that grievance. Each profession has a separate function. The physician may help the pharmacist by frowning upon the prescribing of pharmaceutical specialties. The druggist must do his best to avoid usurping the legitimate province of the physician by discouraging by every means in his power counter prescribing. But let me insist again that the most thorough confidence must exist. The moment that mutual confidence is shattered, trouble is in store for both physician and pharmacist.

## THE DRUG TRADE OF THE WEST AND HOW TO PROTECT IT.

By F. E. Arkell.

Mr. Chairman and Gentlemen.

In choosing the above subject, I had in view only the financial side of the drug trade. This is of the most vital interest to us all, for while there may be a few who are in it for the good of humanity, one and all are in it for the good of himself. During the twenty years I have been in the retail trade there have been many changes both in the manner of conduting business and in the profession itself. Twenty years ago the drug business was considered gilt edge. Failures were comparatively unknown. We have seen things go from bad to worse, till to-day the drug trade equals, if not exceeds, in failures any other branch of commerce. For this state of affairs there are no doubt

many reasons, some of which we had no control over, but over others we have only ourselves to blame. It is my intention to point out a few of the causes over which in the east they had control, to see if some steps cannot now be taken to guard against the abuses bringing about the same demoralized state of affairs here. To begin with, I would tackle the departmental store abuse as it is now no doubt the worst we have to deal with. We have none here yet. But how did they start in the east? From the corner grocery; keen opposition in that trade driving it quickly into the general store. From there the next step was then departmental stores. Who was to blame for the corner grocery getting this trade The druggists. They were to blame first by not being united, thus failing to get proper legislative laws, and next by being indifferent. We have not the full power of the departmental store here yet,, but is it to anything the druggists have done, or are doing, to prevent it? Who is doing the essence trade of your town? Who is doing the spice trade? The baking powder trade? The toilet trade? No doubt, the corner grocery. We, by our indifference allow these to slip through our hands. The patent medicine trade will soon follow. My remedy is to urge upon every druggist to cater for the trade in these lines. Have your essences, your spices, your baking powder and your toilets the best and cheapest. Not necessarily the best money, but the cheapest for the careful housewife to use Be after this trade and keep it. Then to guard against the patent abuse. We must be more closely united. Not as now, so many units. Let us get thoroughly organized into districts. By petitioning the Legislature to divide the Province into distrists, say six districts, with seven representatives, numbered 1, 2, 3, 4, 5, 6, beginning at the East and going Westerly. For instance, No. 1 comprise all East of Range 6, West and North of Township 9, and have two representatives. No. 2 South of 1. No. 33 West of 1 to the 17th Range; No. 4, South of 3 and West of 2; No. 5, West of 3 to the boundary; No. 6, South of 5. This would give the Province epual representation, and create more interest in the Council elections and the same districts could be organized into local associations for the arranging of tariffs and looking after local abuses. This would remove all danger of centralization, of which we had a sample last election, and which was one of the great causes of lack of interest and unity with all its fruits in Ontario. Having unity then among ourselves we could approach the Legislature with some force and make an effort to have laws passed governing patents which would protect the druggist and the public. I would suggest the obtaining of a law which would compel the manufacturer of every patent to have the formula of its contents plainly printed on the label and any containing poisons named in schedule of the Act sold only by qualified druggists. This would also guard the public against the Indian doctor joke and other such like frauds—giving the profits of the trade to those who have spent years of labor in preparating themselves for the business. Then what may be termed the most important point—let us be true to ourselves in matters of business. No substitution, no peddling of doctors' prescriptions. Let us all the time strive to keep inviolate the confidence of the medical men, not making the slightest change in a prescription without consulting them, thereby compelling the doctors to be our allies and our friends. If we have a customer who insists on our prescribing, let the mixture be our own, not a doctor's, which has been entrusted to us. Let us be chemists and druggists, making our own preparations, which being made professionally will command the sale over and above all others. Some may think that this would bring us in conflict with the patent medicine men, but it would not be our intention to substitute one for the other, but to sell one in competition with the other, which is allowable all the world over.In this way we would command the respect of the general public and give the

profession a more professional standing. The sum of the whole mater therefore is organization and attention to business.

## SIDE LINES THAT PAY.

By A. T. Andrews, Gladstone, Man.

Mr. Chairman and Fellow Druggists.

Surrounded as we are, in the present day, by an ever-growing army of competitors, which, a few years ago, was unknown to our profession, we find the grocer selling toilet soaps, infants' foods, castor oil, Epsom salts, saltpetre and patent medicines; the dry goods merchant handling hair brushes, tooth brushes, combs and perfumes; the jeweller practically doing the business of the optician, and the department store—that enemy of all lines of legitimate business—not content with ruining the prices of patent medicines, has actually put in the dispensing counter. Does it not behove us, therefore, to study carefully what lines in our calling best repay our special attention, to look about us, to see what fresh fields we may discover, in which to plant our dimes and cultivate them, till we too may reap the golden crop of dollars?

I will not take up your valuable time this evening in discussing the ordinary departments usually found in the retail drug store. I wish, rather, to bring before your notice some of the outside lines which it will pay us to handle. I will merely touch on two lines found in every drug store—perfumes and toilet soaps.

Perfumes.—In view of the fact that the public can just as easily buy perfumes at the dry goods store as at the drug store, it is necessary to offer some special inducements to keep this trade. Those inducements are cheapness and good value. I would advise every druggist to carry three grades of perfumes.

1st. The same cheap lines usually found in the dry good stores at the same or lower prices. The same markets are open to us that are open to them, and, while the profits are small, it will pay us to have these goods for sale.

2nd. A cheap line put up by ourselves in 1-oz. bottles to retail at 25c. at a cost of about $1.10 per doz., thus giving us a fair profit. Do not put our firm name on this line of perfume. I add this advisedly. Never allow a bottle to leave our store bearing our firm name, whether filled with perfume, distilled water or goose oil, which can possibly give dissatisfaction.

3rd. The best quality of perfumes. (a) Standard lines manufactured by reliable firms, who sell to druggists only. On these goods we may look for our best profits. (b) The best bulk perfumes we can buy, put up in ½-oz. and 1-oz. bottles, with neat, attractive labels bearing our firm name. These are the goods to push—they warrant our recommending them, and we will have no difficulty in getting 50c. per oz. for them.

Toilet Soaps.—The day is past when the druggist can sell any large quantity of expensive toilet soaps. We must take the trade as we find it. Let us sell the cheap as well as the dear. Is it not better to sell a large quantity of cheap soaps and a small quantity of expensive soaps, than to sell only a small quantity of the latter, and allow the grocer to supply the bulk of the people with the former? What matter it, if this cheap soap ruins the complexion? What if it reddens and chaps the skin? Does it not create a demand for our "Complexion Balm" and "Winter Lotion?" We can get a big attractive cake to sell for 5 cents. Fill the window with them, advertise them, placard them with plainly-printed price cards, and our sales of toilet soaps will be doubled.

Passing now to the second part of my subject — those lines not usually carried by the chemist and druggist, you will notice that my paper takes the form, more or less, of a personal experience. Living, as I do, in a country town, I will naturally speak of those lines which may, with propriety and profit, be offered for sale by the country druggist, I suppose that three-fourths of the druggists in the province of Manitoba are known, not so much by the title of "Chemist and Druggist," as by "Druggist and Stationer."

The drug trade in itself being so limited in our rural districts, it is necessary to combine with it the stationery business. In my own case I devote fully as much of the space in my store, and of my attention, to the stationery as the drug department. While I cannot advise all druggists to put in a line of stationery, yet I believe it well repays those whose time and space is not altogether taken up with the strict drug trade.

It is not my purpose to inflict upon you a treatise on the stationery business, but there are a few pointers which it is well to notice.

1st. Let the stationery stock be kept neat and attractive. Have a place for everything, and have evrything in its place. You will find that moveable tables are much better than counters upon which to display your stationery stock. You can change the display frequently, and also change the arrangement of your store occasionally.

2nd. Keep the stock well assorted without going into those specialties which only large stationers have call for. Study the local demand and cater to it.

3rd. Do not buy too much of any one line, especially in fancy goods. At Christmas time be careful not to stock too large a range of doubtful and perishable goods. Nothing deteriorates in value so quickly as this class of merchandise.

4th. If you carry novels at all, carry a good assortment. Buy in one hundred lots and get the best prices. Keep up with the times. Take a journal devoted to the book and stationery business. You cannot invest a dollar that will multiply as quickly as the one you pay for such a paper. Study it carefully and buy the latest novels by popular authors. Buy one for a sample; if the trade warrants it, you can re-order. Should you not sell your sample you will at least have the reading of all the good things in the current literature of the day. Occasionolly fill the window with novels, and once in a while advertise that such a book, by such an author, is for sale at your store. I have found it pay to establish a "circulating library" under these regulations, member to buy first book at retail price. He will then be entitled to exchange it for another for 10 cents, and so on, each reading will cost him 10 cents. I find that nearly all of the books will stand four readings. Try this plan; it will pay you.

Other side line which I have found successful are:—Smokers' articles, wall papers, jewellery, silverware and house plants.

1st. Smokers' Supplies.—I have found it pay to handle only cut tobaccos, pipes, pouches, cigars and cigarettes. The great temptation in smokers' supplies is to overstock. Nearly every commercial traveller has a side line of cigars. The first thing you know you will have four times as many cigars as you need for your trade. Two brands of cigars to sell at three for a quarter is just as good as ten. Buy no cigars as cheap as $40 or $50 a thousand. A line at $60 will prove to be the most satisfactory for a three for 25c. cigar. Be sure to handle a line of imported cigars. Select a good brand to retail at two for 25c. Stick to that brand. You will find that travellers will get to know and like that brand and connect it with your store. In this way every time they visit your town they will remember that they can get a good cigar at your store, and will be sure to give you a call.

2nd. Wall Papers.—My experience has been that it is best to start with a good large range of papers, display and advertise it well. Have a 5-cent leader. After once putting in a good line of papers, it is not necessary each spring and fall to buy so much. You will always have remnants left which will make your stock appear very extensive. A sample book is of great assistance in making sales. Have a good large-sized book, with the borders to match each book attached to the same. Mark the cost and selling price on the back of each sample. Also label each sample A, B, C, D, etc., and your stock the same. In this way you can find the pattern you want without unrolling the pieces, which soon gives

the paper a dog-eared appearance. During the season have your sample book placed in a convenient place in your front store, so that while a customer is waiting to have a prescription filled, she may turn over the leaves for entertainment. Being in a prominent place, too, you can often, without offence, ask a lady customer if she would care to look over your samples of wall papers.

3rd. Jewellery.—In this line it is safe to buy only from well established firms. Do not get too much at one time, but buy often. People get tired of looking at the same articles constantly. Handle few, if any, watches. You are not a practical watchmaker, and can give no guarantee with a watch. The people expect t' and you are thus handicapped in the competition.

4th. Silverware.—I come now to perhaps the most pleasant and profitable of side lines. The country druggist is often situated in a town where there is no jeweller. In that case he may just as well sell silverware as allow the hardware or some other merchant to reap this profit. In putting in a stock of silverware, buy enough to make a good display. It will make a wonderful difference to the appearance of your store. Buy no low-priced, cheap goods, but quadruple plated silverware from a reliable firm. Stick to that firm and feel safe in recommending the goods. Let those who will, go elsewhere to buy goods that tarnish and show the iron. You cannot afford to have anyone dissatisfied with any article of silverware coming from your store. I was surprised at the amount of silverware that went off at Christmas time. For wedding presents, too, there is a demand off and on the year round, thus placing silverware more desirable to handle than some other classes of fancy goods.

5th. House Plants.—Arrangements can now be made with city greenhouses whereby the druggist can handle house plants and bedding plants to clear from 25 to 35 per cent. While not up to our usual percentage of profit, you will find that no line will draw the public like plants in your window. No one can resist a beautiful flower in full bloom. In our little town in four weeks I sold about $40 worth of these goods. If you have a taste for gardening, you may just as well raise your own bedding plants, both vegetable and flower. This is nearly all profit. Have a good-sized hotbed and raise early healthy plants, and you will be surprised at the revenue from that source.

The last side line I will mention, and the best paying, is advertising. Keep your business prominently before the public. Advertise in all the ways you can, in all the places you can, whenever you can, to all the people you can. Everyone knows enough to come in when it is raining, or to go to the drug store for a pill to remove the jamb, but everyone doesn't know that they can get toilet soaps as cheap at the drug store as anywhere else, that you have a "lightning renovator" to remove that grease spot, nor that you have an elegant display of silverware for the Christmas trade.

Let us rouse ourselves, and be alive to our possibilities. The successful druggist of to-day is not the man who headed the list at his examination ten years ago, nor the one who can tell you all about the latest discovery in organic chemistry. These are all right, too, but the successful druggist of to-day is the successful merchant.

# Manitoba Medical College

WINNIPEG

IN AFFILIATION WITH THE UNIVERSITY OF MANITOBA.

Established 1883. Incorporated 1884.

J. WILFRED GOOD, M.D., Dean. W. A. B. HUTTON, M.D., Registrar.

The Primary Scholarships of the value of $90, $75 and $50 are open for competition at the close of each second session.

Three Intermediate Scholarships, value $75, $50 and $30, are offered for competition at the end of third year.

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The total Collegiate fees amount to $305 including enregistration for students taking the four year course, payable if desired in four annual instalments of $75 each. Graduates in Arts taking their work in three years will be required to pay $270 or $90 each year.

All college fees must be paid in advance to the Registrar on or before December 15th,

Hospital Tickets for the Winnipeg General Hospital are ten dollars for each session.

Maternity tickets $6.00.

Tickets must be paid at commencement of the session.

The University fees are payable 20 days before each examination to the Registrar, Mr. Pitblado. 1st year, $2 ; 2nd year, $2 ; 3rd year, $2 ; 4th year, $2. M. D. Degree, $10 ; C. M. Degree, $10 Ad. Eundem. $5.

Good board may be had in convenient parts of the city at $4 per week. Board and room from $5 to $8.

The Board of Directors of the Winnipeg General and St. Boniface Hospitals appoint four Manitoba University graduates as Resident House Physicians and Surgeons.

Clinicall Clerks, Dressers and Post Mortem Clerks, are appointed by the attending Physicians and Surgeons.

For further particulars address

W. A. B. HUTTON, M.D.

155 Mayfair Avenue, Fort Rouge, Registrar.

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