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ORIGINAL COMMUNICATIONS.

ART. XI.—*A case of Intestinal Obstruction.* By N. BETHUNE, M.D.
Toronto.

Francis ———, æt 43, ostler at an inn in this city, a man of well knit frame and strong constitution, was seized on the night of June 30 and July 1st instant, with violent pain in the epigastrium, and constant vomiting of dark bilious matter containing a large quantity of mucus plentifully streaked with blood. The pain was increased by pressure—no tension of the abdominal parietes—tongue clean, pulse natural, skin hot and perspiring—urine scanty, turbid and high coloured—bowels constipated. He was sitting in the bed, his head resting upon his knees. I had attended this patient on two previous occasions; once in Feb. 1851, and latterly in June of the present year; on each occasion obstinate constipation was the chief symptom, and was relieved in the course of five or six days by venesection and the more active aperients. In the present instance however, notwithstanding the free abstraction of blood both by the lancet and by cupping, the exhibition of the most powerful purgative medicines, the employment of enemata, simple and medicated, and the introduction of the long tube into the colon, nothing passed but a few scybala on the 8th day. The symptoms gradually increased in intensity, stercoraceous matter being ejected with the fluids vomited. Dr. Hallowell saw him with me on the 9th day. The long tube was again introduced, and the colon well washed out with a weak solution of the inspissated ox-gall, and purgatives again exhibited—

all however with no effect. Symptoms of enteric inflammation supervened on the 10th day. Drs. Widmer and Hallowell in consultation. Great tenderness of the abdomen, chiefly in the course of the colon. He was bled from a large orifice, in the upright posture, till symptoms of syncope were apparent, and afterwards immersed in the warm bath. The pain was slightly relieved in consequence. 11th day, 9 A. M. He was lying upon his back perfectly incoherent—constant moaning—surface cold and clammy; vomiting at intervals of bilious matter and stercor—bowels unrelieved—pulse very feeble 130. Ordered an enema of cold brandy and water, and to take brandy by the mouth in moderate quantity. 3 P. M. was conscious, pulse 120 and much firmer—lying upon his face—countenance expressive of most intense anxiety—retching constant—ordered a pill composed of a grain each of calomel and opium every 4th hour, and a bolus of 8 grains of the inspissated ox-gall every second hour. To take nothing else by the mouth, excepting an occasional sip of cold water, and to have an injection of a quarter of a pint of strong beef-tea and port wine every three hours.

12th day—passed a small amount of pale fluid fæces about 7 o'clock last evening; to day he has had several evacuations of the same character, amounting in the aggregate to one quart and a half. Less anxiety of countenance, pain on the decrease; pulse firm 115; urine in larger quantities; stomach much less irritable. To continue the medicines—the gall at intervals of three hours.

13th day—Has had two evacuations of a dark greenish colour—pulse 96. Still a good deal of tenderness about the umbilicus. To take a little beef-tea by the mouth, and to discontinue the enemata. The rest of the medicines as before.

14th. The bowels have been freely relieved, the fæces passing abundantly in a pulpy form—no pain whatever—pulse 80—thinks he is well enough to walk about. To discontinue the remedies, and to take an ounce of castor oil.

15th. Feels perfectly well—but rather weak—ordered tonics.

From this time he rapidly recovered.

A few remarks may not be out of place here. The obstruction was undoubtedly caused by impacted fecal matter. It was probably in the small intestine, for there was no evidence afforded by manipulation of the abdominal parietes of any mass of a size sufficient to obstruct the large cylinder of the colon. This is moreover shown to a certain extent by the easy introduction of the flexible tube, and the ejected enemata being perfectly untinged by fecal matter. We have a valuable diagnostic sign in the quantity of urine excreted, as pointed out by Dr. Barlow, of Guy's Hospital. Speaking of the quantity as indicating the situation of obstruction in constipation, that gentleman observes, that in those cases "where there existed a perfect obstruction in the upper part of the small intestines, there was almost a total suppression of urine*"; where there was a diminution in the calibre of the canal in the same situation, the urine was diminished in quantity; and where the small intestines were free, and the obstruction was

* Dr. Stokes, in his work on the Practice of Medicine, has called the attention of Pathologists to the fact that, in ileitis, suppression of urine was one of the most prominent signs.

seated in the colon, the urine was very abundant. If then we regard this statement of facts merely in a diagnostic point of view, as aiding us in determining the probable seat of obstruction in the alimentary canal, it will not be without its use; for every symptom must now be considered important which can help us to decide a question, the answer to which will go far towards determining the expediency of endeavouring to relieve an insurmountable obstruction by surgical operation."

I am happy to be able to furnish this to the many instances related by Allnat, Vanderpool and others, of the wonderful efficacy of the ox-gall in this form of obstruction. I cannot do better than quote Dr. Clay's remarks upon the *modus operandi* of this valuable agent: He says, "If I were asked how the inspissated gall acts, so as to procure a more soluble state of the fecal mass, I should say distinctly neither as a laxative, purgative, nor drastic, all such producing to a greater or less extent a stimulus to the intestinal coats, exciting them to propel their contents, and to excite an extra secretion from the exhalants.* (The latter action, however, in my mind, is rather questionable.) Such is the generally allowed operation of the various degrees of cathartic medicines, and the common consequence arising from taking such is nausea, sickness, griping pains, &c., more or less, according to the character and dose of the medicine employed. Inspissated gall, on the contrary, produces not the slightest pain or sickness, and yet a motion can with equal or greater certainty be relied upon, and that in a form most easy and natural for propulsion. It is evident its action is not as a cathartic, but as a direct solvent to the accumulated hardened fecal mass, *the consequence of deficiency of quality or quantity of bile in the alimentary canal*; as such its effects may be produced without pain or uneasiness, which would not be the case if its action was on the principle of cathartics, &c."

There is another important point in connection with this agent, which is spoken of by, I think, all who have turned their attention to it. I allude to its power of nullifying the constipating effects of opium. It is abundantly proved in the case before us, where the patient took a grain of opium every fourth hour for nearly three days. I shall conclude by quoting Dr. Allnat's remarks upon this subject. "The constipating effect of opium," he says, "is principally produced by its action upon the liver, the secretion of which it arrests and renders insufficient for the due stimulation of the alimentary canal. In many cases this is a serious drawback to the exhibition of opium, for we often require its sedative, when its constipating effects would be sufficiently injurious to preclude its use. Five or eight grains of inspissated ox-gall will neutralize the effect of a grain of opium, without destroying its sedative efficacy. It also prevents in a great measure its injurious action upon the brain."

* Dr. Addison, some years ago, in the Physical Society of Guy's Hospital, when the subject of constipation was being discussed, remarked that he had in several instances found drastic purgatives perfectly useless, while the frequent exhibition of milder aperients, such as olive oil, was attended with the best results.

ART. XII.—*On the Proximate Cause of Inflammation.* BY CHARLES ROLLS, M. D., WARDVILLE, C. W.

Previously to leaving England, I published an article on the foregoing subject in the London Medical and Surgical Journal, edited at that time by Dr. McLeod. The peculiar doctrine I hold on this pathological point, was therein generally explained, nor has the experience of many subsequent years, altered in any respect my opinions thereon. The London journals have not hitherto been very extensively circulated amongst the medical practitioners of this country, and I dare say the theory will be as new to them as if it had never been printed. Trusting that it may prove as acceptable, and anxious as far as I am able to elucidate every disease connected with the human frame, I will again enter on the discussion with the advantages that years of experience have added since I wrote the former paper.

Before entering on the immediate subject of this article, it will perhaps be advisable to make some passing remarks upon the disease of Inflammation itself, likewise on its remote causes; so that the subject being made continuous, might be better understood by the generality of readers, at the same time that it will afford me a better opportunity of offering some passing remarks upon the generally received doctrines of the day.

Inflammation is defined and generally understood to be that state of a part in which it is painful, hotter, redder, and somewhat more turbid than is natural; which typical symptoms, when present in any considerable degree, or when they affect very sensible parts, are attended with fever, or a general diseased action of the system.

This definition is correct, with the exception of the second symptom, which is not accurately so, and may lead an inexperienced person to false impressions. It is well known by the profession that Mr John Hunter tried various experiments to ascertain whether the *sensible* caloric was augmented in Inflammation, and the result of them all was, that it was not so. With this conclusion before us, it would be more accurate to say, or rather to define this second symptom of Inflammation, "*a sensation of increased heat.*"

Inflammation is generally divided into *healthy* and *unhealthy*. These terms I cannot approve of, because they are apt to mislead, and more especially as, according to Mr Hunter's theory, Inflammation is supposed to be a process set up by nature in many cases for the regeneration of diseased or damaged parts. This doctrine I cannot reconcile to my mind; nor can I conceive that one of the most fatal of diseases can, in any case, be called a healthy process. I think the term misapplied, apt to lead the mind to wrong conclusions, and, connecting the phrase with Mr Hunter's peculiar doctrines, very frequently to *wrong practice*. I do not wish by any means to carp at a word; but I do wish, that as ideas are received into our minds frequently by words, that these words should in all cases convey a true and correct meaning.

The next division of Inflammation is into acute and chronic. This division is almost as old as the science of medicine itself, and has obtained the sanction of the best surgical writers. Yet am I convinced that it should never have been made, and that the doctrine is founded in error. What is the idea, let me ask, that the term "acute inflammation" would convey to the mind of a young man just commencing his routine of medical studies? Is it not that of a violent, aggravated form of disease, which the more experienced practitioner will tell him is of such a nature that it must, in the ordinary course of things, run its duration in a short period? The system cannot endure this long continuance. What is the idea he will form then of *chronic* Inflammation? Certainly, that as before, it is a violent, aggravated form of disease, which, in the form of *acute*, the system is unable to endure for any lengthened period; but when the word "*chronic*" is added, lo and behold, it can be endured for an unlimited time,—such magic is there in a name. Again I say I do not wish to carp at words; I only object because when misplaced, they convey a wrong idea, and because I am well satisfied that Inflammation (accompanied with all the symptoms by which the disease is denoted) can, and does only exist in the *exact locality* in which it takes its origin, *for a limited period*, and therefore should always be termed an acute disease, to the utter exclusion of the word "*chronic*." With these few passing remarks, we proceed to the remote causes of Inflammation.

These are generally divided into two general classes. The first includes all such agents as operate by their stimulant or chemical qualities; for instance, Cantharides, heat, &c. The second class are those which act mechanically, such as bruises, wounds, &c. To these I would add a third cause, viz., cold, applied directly to the part. The principle on which this becomes a remote cause of Inflammation, I will endeavour to explain in its proper place.

Now, in any theory endeavoring to point out the proximate cause of this disease, various points must be borne in mind; and that theory, to be entitled to credence, must give an explanation not only of the leading symptoms present in Inflammation, but also it must show the chain by which the proximate is connected with the remote or exciting causes, and likewise with the subsequent symptoms which either invariably or occasionally accompany it. Let us see, first, whether any of the hitherto promulgated doctrines will bear this test. If not, they are certainly incorrect, and not worthy of credence.

Passing by the most antiquated of the doctrines on this subject.

The celebrated Boerhaave imagined the proximate cause of Inflammation to consist in an obstruction of the extreme vessels, caused by an unusual thickness or viscidty of the blood; which viscidty or thickness he taught was produced by diarrhœa, perspiration, or any other cause which might be supposed to be an agent. Another of his doctrines was what he termed an *error loci*, produced, for instance, by a check of the perspiration; which being retained, dilated the vessels, and allowed the red globules to enter, and produce a more permanent obstruction.

As regards the first of these ideas—that is, the doctrine of viscid-

ity—how is it possible that this can be admitted as a correct idea. Suppose a spark of fire to touch the tunica conjunctive, or suppose with a needle we prick the web of a frog's foot, or take any other delicately sensible part of the body, and suddenly apply a powerful stimulus: the consequence is Inflammation excited almost in an instant. What has this to do with viscosity of the blood? How will *viscosity*, moreover, account for *increased* action? the *sensation* of increased heat? the bright scarlet appearance of the part? which should rather be of a dullish leaden hue, were viscosity the cause. the pain, or excited sensation, which should rather be dulled, than exalted—the general febrile symptoms which often attend? and the frequent destruction of the part from over-excited action? Viscosity will never account for these.

The error loci, too, arising from the obstruction to perspiration, is an equally untenable doctrine. If I understand it aright, every time any part of, or even the whole body, is exposed to a sudden check of perspiration, so often must inflammation follow. Suppose, for instance, the hand at any time to be covered with perspiratory moisture, every pore of the skin open, dilate, and perspiring freely, the hand is suddenly plunged into cold water, the perspiration is immediately checked; dilation of the extreme vessels should immediately occur; *error loci* and Inflammation: how absurd and how untrue is this. Do we not know that it is a common practice with some nations, the Russians in particular, to leave their warm baths (every pore of the cuticle pouring out perspiration), and roll themselves in snow, alternately repeating the bath and the snow for hours together? and this they do with impunity, notwithstanding that every change from the one to the other should, according to this doctrine, excite Inflammation from head to foot. In fact the idea is absurd; the theory too confined; the *error loci* is true enough—we all can observe that—but the cause of that *error loci* can never be explained by such a supposition.

Dr. Cullen attributes the proximate cause of Inflammation to a spasm of the extreme arteries, supporting an increased action in the course of them; and further he goes on to say, “the vis medicatrix naturæ increases still more the action of the vessels.” His own words run thus: “A spasm of the extreme arteries, supporting an increased action in the course of them, may therefore be considered as the proximate cause of Inflammation, at least in all cases not arising from direct stimuli applied.” Let us explain this doctrine by other language, and see how it will read. It is admitted by all that in Inflammation the red particles of blood have forced their way into a channel through which they do not flow naturally. In short, according to the school term, there is an *error loci*, and in this *error loci* consists the essence of the disease; indeed, when once effected, Inflammation exists in all its essentials. But Dr. Cullen says this *error loci*, or congestion, is the cause of the spasm. How, then, can the spasm be the cause of its cause—that is, the congestion? The idea is altogether founded in error, and Dr. Cullen has totally forgotten the relative situations of cause and effect. In homely language, he has put the cart before the horse. After all,

there is but little variation between his and Boerrhave's theories;—one uses the word obstruction, produced by checked perspiration; the other, spasm produced by congestion.

Mr. John Hunter's opinions, like many others he promulgated, were certainly original, and very ingenious; but alas, they want probability to endorse them. According to him, Inflammation is to be considered only a disturbed state of parts, which requires a new but salutary mode of action, to restore them to that state wherein a natural mode of action alone is necessary. Mr Hunter's meaning, in his various writings, is often obscure, and the passage quoted above partakes of the same fault. If I understand it aright, it is this:—Inflammation is a salutary process set up by nature to restore injured parts to a natural state of action. Let us follow out this doctrine to its legitimate conclusion, and see what it will come to. A person walks out on a windy day; a little dust blows into his eyes; they become inflamed, and the man is confined to his house for three or four weeks, undergoing the salutary process of nature—that is Inflammation; to get rid of a little dust, that is the disease. Another pricks his finger, perhaps under the nail; the part inflames; that is the process of nature, to get rid of the prick on the finger, and the patient poultices, and applies lotions, hot and cold, physics and purges, and confines himself to his house for perhaps weeks. For what? Why, to subdue the salutary process which nature had set up to mend the original injury—the prick on the finger. Verily, nature takes a very round about way to work occasionally, if Inflammation be one of her salutary processes for restoring damaged parts. No, no. The theory is injurious, as all Mr Hunter's theories were; but it is useless to tell Physicians of this generation, that Inflammation, with all its terrors, and its frequently fatal terminations, is a salutary process set up by nature to repair an injury which, in fact, were frequently no injury at all, were it not followed by this *very salutary process* of nature, to which is to be attributed the major part of the accompanying derangements. How can such a doctrine be true? What injury, I ask, would a bullet frequently do in the abdomen, were it not for the Inflammation which follows its presence there? What damage would be done to the lungs in many cases, were its presence there not followed by violent Inflammation? or what injury would a ball do in the brain itself, were it not for the intense irritation excited by its presence, which, perhaps, Mr Hunter would tell us is nature's salutary process to get rid of it? It may be, but the cure is worse than the disease.

Mr. Hunter goes on to remark, "The act of Inflammation is to be considered as an increased action of the vessels, which, at first, consists simply in an increase or distension beyond their natural size. This increase seems to depend upon a diminution of the muscular powers of the vessels, at the same time that the elastic power of the artery must be dilated in the same proportion."

Mr. Hunter has in this theory fallen upon the same fact as both Boerrhave and Dr. Cullen; that is, that the extreme vessels are dilated, but he has assigned different causes for it. Boerrhave supposed it produced by *obstruction*, Dr. Cullen by *congestion*, and Mr.

Hunter by a *diminution of the muscular powers of the arteries*, at the same time that the vessel is dilated, and the whole he attributes to a necessary operation of nature. Mr. Hunter has here fallen into much the same error as his predecessors; every one knows, because every one can see (as I before observed) in any case of Inflammation, that the extreme vessels must be dilated, there being a passage afforded to new particles of blood, which previously was not the case. But this is not the question: the point of consideration is to connect the remote and proximate causes in one chain; one must follow the other; one must explain the other, and it not, no rational, reasonable, investigating mind, will be satisfied with a theory, let it be ever so plausible, or emanate from any man, however justly celebrated. Now we all know that one remote cause of Inflammation is *stimuli*; we likewise know that the immediate effect of stimuli on the human body is contraction of the muscular fibre; contraction and enlargement are certainly not the same. How, then, can Mr Hunter be correct? It is impossible.

The last theory which I shall notice in this paper is the general opinion of the day; which is, that an *increased action of the vessels* is the proximate cause of the disease of which we are treating. If I understand *increased action* in the human system aright, and if this be any other than a variation of the old theories, then must be with increased action, increased muscularity; in other words, increased action in an inflamed part, must partake of increased muscular action. Now, muscular action produces contraction, and if contraction of the vessels affected in Inflammation, be brought to a *continued* state of contraction by this increased action, how is it possible that that state of distention can ever take place by which the old particles of blood are allowed to enter? It is impossible.

I do not consider it necessary to enter into a more lengthened refutation of the doctrines we have passed under consideration. It will occur to every considerate mind that there is something wanting; some connecting link to explain cause and effect, which neither *obstruction, congestion, distension*, nor *increased action* will supply; and until this be furnished, we shall still be at a loss in giving any rational explanation of the proximate causes of Inflammation. To afford this is the object I have in view in publishing this paper, and I will now proceed to attempt it: it is for the profession to judge whether satisfactorily or not.

I premise that Inflammation invariably originates in the capillary vessels.

That these capillaries, which naturally *do not* convey red-blood, are the branches given off from trunks which *do* convey it.

That every vessel carrying red blood has numerous capillaries branching from it, of which the red blood-vessel may be called the trunk.

That in every case of Inflammation, more or less in number of these capillaries are constrained to convey red-particles, which naturally they will not do.

That the action of the heart, of the arteries, and of the capillaries, combine to keep the whole volume of blood in a progressive state

of motion; and that this action, produced by muscularity, when combined with the *vis-a-tergo*, which is pronounced by other concurrent causes, are quite sufficient to prevent any retrograde course in this fluid, and in case an insurmountable obstacle should occur, will enable it to find other channels by various means, as we find exemplified when any large vessel is tied.

The most certain remote causes of inflammation, and therefore the best to argue upon, are stimulants, and the topical application of cold; as for instance, allowing a piece of ice to dissolve in the mouth, which I have frequently observed to produce inflammation of the tonsels almost instantaneously.

Take now the simplest case which can occur. Suppose with a needle we prick the eye-ball, or the web of a frog's foot, and inflammation occurs. What is the needle in this case? It is a stimulus; that is the remote cause. What effect has a stimulus on the part irritated? It produces contraction of the muscular fibre. Suppose the part irritated to be a capillary (as it must needs be if our microscope informs us rightly, the whole surface of the body appearing to be composed of such), what will be the effect produced?

Of course the coats contract, and the diameter or calibre is for the time diminished. Now, for simplicity's sake, let us call the trunk of this vessel (that is, so far as it carries red-blood) A, the irritated capillary B, and suppose two other capillaries, C and D, to proceed from the same trunk, A. What will be the action produced during the period that the effect of the stimulus remains on the capillary B? It will be this: at the instant of the application of the stimulus a certain quantity of fluid arrives in the trunk A, to be transmitted through the capillaries B, C, D, which were exactly of sufficient diameter to allow of the passage in their natural state. But an obstacle is presented to its free transmission; one of the capillaries is reduced in diameter; it will not perform its duty; it is contracted; and will allow of the passage of little, perhaps none, of the fluid awaiting transmission. What is the consequence? it cannot retrograde; the *vis-a-tergo* is greater than the resisting powers of the two other capillaries; it progresses, and but one consequence can follow, and that is the enlargement of the capillaries C and D to a sufficient extent to allow of the transmission of the whole fluid, that is, of almost, or quite one-third more than the natural quantity. But the enlargement to this extent of these capillaries, produced by the *vis-a-tergo* applied, must allow of the passage to a certain extent, not only of serous, but also of the red-particles of blood, because, if, in the natural state, a passage is allowed to the red-particles to a certain extent, and then further progression is only stopped by a diminution in the calibre of the vessels, most certainly, when that calibre is enlarged, the red-particles will force a way so far as that enlargement will allow of their transmission. The consequence is that these two capillaries, C and D, become engorged with red-particles, forced as it were into them, and not affording a ready passage to the same, the circulation in them becomes labored, and to a certain extent retarded. Meanwhile the effect of the stimulus has been expended on the capillary

B, which immediately recovers its natural diameter; but the engorgement of the vessels C and D preventing the free transmission of the amount of fluid which arrives at the trunk A, an unusual quantity now awaits transmission through the capillary B. This vessel, in consequence, becomes unnaturally distended, having given in its turn admission to red-particles. The presence of these particles in the capillaries is similar to that of extraneous matter; they act on them as a stimulus, and produce a contracted effort on their part to rid themselves of their presence. The nervous system partakes of the local excitement; the transmission of red-blood through parts unused to its presence, brings with it a larger amount of caloric in a given space of time than is habitual to it, and the tituration which its particles undergo in the laboured action of the capillaries combines by rendering it free, to make its accumulated presence *sensible* to the nervous system. The undue excitement of this (the nervous) system, produces the sensation of pain; and the engorgement of the capillaries, the swelling attendant on the disease; and the moment these symptoms are altogether present, that moment does the disease exist in its various characteristics, let its extent be greater or less.

To be as concise as possible in the explanation of my ideas concerning the subject under discussion, I have supposed only one trunk and three capillaries to be affected, and the stimulus, or remote cause, to be the slightest possible, but the intelligent reader will easily perceive that the same theory will apply where the primary vessels stimulated are hundreds or thousands, and those primarily preorged ten times the number.

Cold (topically applied) is another cause of Inflammation. Let us consider it under the action of this agent. It might operate in two ways; either producing its effect (*contraction of a part*) by the rapid evolution of caloric, which in its passage acts as a stimulus, in a similar way to the remote cause of action considered in the former paragraph, or its effect might depend on its astringent or contracted powers. Be it which it may, the consequence when applied (say to the capillary B) will be the same as in the former case, contraction—that is, diminution of its calibre. The capillaries C and D will become engorged as before; the *vis-a-tergo* by this means being much increased, will overcome (if not previously effected by the withdrawal of the cause) the contracted state of the capillary A, which in its turn becoming ingorged with red-particles, the whole phenomena of the disease, as in the former case (when a stimulus was applied), will follow.

It will here be seen that I differ to a certain extent from Mr Burns, in the explanation he gives on the operation of cold, as a remote cause of producing Inflammation. He says, "Cold may be applied in such a degree, and for such a length of time, as to destroy the vitality of the part directly, in which case sloughs are found. Secondly, it may be applied in a less degree, or for a shorter time; and afterwards a stimulant, such as heat, may be applied, which will excite Inflammation (and this he has endeavored to explain the rise of, by suggesting cold, as the remote cause), thereby the vitality of the part being diminished, and giving a better chance to the stimulus, heat, to exert its deleterious influence." But this explanation cannot

be admitted, in some cases, as for instance in one I cited before, when ice received into the mouth produces inflammation of the tonsils almost instantaneously, and without the subsequent admission or application of heat. It is true Mr Burns to a certain extent is correct, as for instance where a person, from exposure to cold, for some time, becomes almost benumbed, and is then suddenly brought before a warm fire: in this case Inflammation frequently ensues; but it should be always borne in mind that it is the sudden exposure to heat which acts as a stimulus, operating on an organization depressed in its vital powers, which, in this case, is the remote cause of the Inflammation—not the cold, which has merely acted in depressing the vitality, and would not have caused inflammation to ensue had it not been for the subsequent application of a stimulus. Under this idea I do not perceive that Mr Burns has given any explanation of the operation of cold as a remote cause in the production of the disease.

Of the second class of causes producing this disease, and which are supposed to act mechanically, one is Wounds. I am not altogether disposed to acquiesce in the general opinion that a wound acts merely as a mechanical cause in producing Inflammation. I feel more inclined to the belief that by this wound, or in the production of it, some stimulus is applied to the vessels concerned, whereby the disease, as in the former case, is produced. Wounds are generally inflicted by metallic instruments, and if a small needle prick in the eyeball will produce Inflammation by the stimulus afforded, I cannot perceive why a large knife, or larger sword, may not do the same. Wounds generally make a discontinuation in some part of the body, and give free admission to atmospheric air, particles of dirt, and other extraneous matter. These are all stimuli to the muscular fibre. Wounds are often badly dressed, and irritating applications used. These are again stimuli to Inflammation. Wounds often penetrate the abdomen, or thorax, and give egress to urine, to feces, and other extraneous matter. These are all stimuli, and quite sufficient to account for the origin of Inflammation, without supposing any mechanical cause to be brought into operation. Under these circumstances, wherever Inflammation takes place, consequent on a wound, I am disposed to account for it on the supposition, that a stimulus has been applied, in some shape or other, which stimulus becomes, as in the first supposed case, the remote cause of the disease, and consequently will range under the same class. The last of the remote causes of Inflammation which we shall take into consideration, is Contusion. This is generally classed as a mechanical cause, but I am very doubtful if it ever acts in the direct way which is generally supposed, in exciting the disease under consideration. My idea of the operation of this cause in producing Inflammation is this. A contusion is inflicted on some part of the body; injury and derangement is thereby caused in the part affected; extravasation of the blood, lymph, and frequently disintegration of continuity; one or more of these causes become, or give rise to formation of stimuli, which in turn becomes the remote cause of the Inflammation. If my explanation be correct, contusions should, as well as the causes already considered, be annexed to the first class of causes.

But I will allow that contusions may occasionally act as a mechanical remote cause, *sui generis*. If it ever do so, the modus operandi I will thus explain. By the contusion, the red particles of blood are impelled by an extraneous force (that is, the blow causing the contusion), so that the capillaries more or less in the part contused are injected with them. A free circulation through them by this means being checked, the trunks of these vessels are immaturely engorged; to relieve which (and by the assistance of the *vis-a-tergo* already mentioned in another part of this paper) an unusual quantity is thrown upon the capillaries in the neighbourhood of the contusion, which becoming engorged, as in the case of contraction, form stimuli; true and veritable Inflammation is established in the neighbourhood of the contused part, and all the symptoms of the disease are in attendance.

I have now endeavoured to explain how stimulants, cold (locally applied), wounds and contusions, become the remote causes of Inflammation. It remains for me to say a few words before concluding this part of the subject, on the production of fever, which is so generally present in any extensive Inflammation; and I think it will not be difficult to trace the connecting link between the topical and the general symptoms which attend the malady. We have already explained how, on the operation of the remote causes being brought into play, the capillary vessels of the region affected become engorged, and consequently do not so freely allow of the transmission of a fluid through their cavities as when in a natural state. The root or trunk of these vessels we have likewise shown is excited to a throbbing state of action, to relieve the distention caused by the unusual quantity of fluid awaiting transmission. This trunk, therefore, to a certain extent, becomes engorged, and the transmission of arterial blood to a certain extent retarded in its passage. The consequence is, that the transmission of arterial blood is again retarded in the vessel posterior to this, that is in the section nearest to the heart. This part in its turn acts or throbs more violently than usual to relieve itself, and so may we trace the whole phenomena in a retrograde course until we arrive at the heart itself. From this point there can be no retrograde impulse. From it the blood must be propelled, and to effect this the contractions are increased in frequency, to overcome the engorgement which otherwise would ensue. This is one cause of the frequency of the pulse in Inflammation, but not the only one.

We have before shown that when Inflammation sets in, there is an engorgement of the capillary vessels in the part affected. To relieve this, the vessels throb or act violently; this is a state of unnatural excitement. According to a law of nature, nervous power is directed to any part of the system for the time being in a state of excitement; the nerves in the part are consequently in an excited state, and this state of the nervous system accompanies the excitement of the arterial system in its retrograde course to the heart, from whence, acting one on another (that is, the circulating system on the common sensorium, and the nervous on the circulating system), that intense fever is produced which is so frequently the attendant of Inflammation.

Of course if it (the Inflammation) be greater, and the part affected more sensitive, the fever will be more intense, and *vice versa*.

I am afraid it would occupy too much of my readers' time, and too much space in the Journal for one article, to enter more into detail on the subject before us. I will therefore conclude, by recapitulating in a summary manner, the chief points which I have endeavoured to comment on, and the theory which I have attempted to establish, concerning the proximate cause of the disease before us.

1st. By the term Inflammation is generally understood that state of a part in which it is painful, hotter, redder, and somewhat more turgid than it naturally is; which symptoms, when present in any considerable degree, or affecting very sensible parts, are attended with fever, or a general diseased action of the system.

I would prefer that the foregoing passage should read thus: "By the term Inflammation is generally understood that state of a part in which it is painful, redder, somewhat more turgid, and *has a sensation of greater heat, &c. &c.*"

2nd. To the division of Inflammation into healthy and unhealthy I entirely object, as I consider it very likely to lead to wrong conclusions and wrong practice.

3rd. To the term Chronic Inflammation I likewise object, as I do not believe that any disease (essentially from its nature acute) can in the same immediate locality become chronic, and any other interpretation of the word *chronic* tends only to mislead.

4th. To Boerrhave's, to Cullens,' to Hunter's, and to the generally received theory of the day, concerning the proximate cause of Inflammation, I am opposed; because they are based on error in the first place; because they do not trace the chain of cause and effect to a legitimate conclusion, secondly; and because, thirdly, they do not account for the phenomena which we every day witness, as attendants on Inflammation.

The theory I would propose to substitute is this: That, as is usually allowed, the remote causes of Inflammation are stimuli; cold, topically applied; wounds and contusions. That in every case in which stimuli are the remote cause, contraction of the capillaries to a greater or lesser amount, and in a greater or lesser number, is produced; that in consequence the capillaries in the vicinity of the same become engorged (as before explained) in the first place, and subsequently the capillaries primarily acted on by the stimuli. In consequence the trunks of these vessels become engorged, and labouring to relieve themselves of their unnatural load, the excitement is communicated step by step through the circulatory or nervous system, until, with the topical symptoms of redness, pain, turgidity, and sensation of inward heat, is connected a pyrexia of greater or less intensity, affecting the whole body. As regards topical application being a remote cause of inflammation, I have endeavoured to explain it, by supposing that the rapid evolution of caloric produced, may prove a stimulus to the contraction of the vessels as in the former case; if so, the phenomena would be similar. Should it act, however, only by its power of producing contraction, I see no difficulty in accounting for its agency under this supposition; as contraction of the calibre of

a certain number of capillaries more or less, produced suddenly, presents a similar state of parts to that before described under the head of stimuli.

I am likewise of opinion, that extraneous matter produced by contusions act as stimuli in cases where Inflammation succeeds. But it is possible that the injection of the capillaries produced by extraneous force, may of itself be sufficient in some cases to account for the engorgement of the trunks of these vessels, which in turn re-acting more violently than usual, may produce over distention, and engorgement of capillaries in the vicinity, and thus establish the disease.

In my next paper I will endeavour to make a few remarks on the sequelæ of Inflammation, viz. . resolution, suppuration, and gangrene.

ART. XII.—*A Note on the value of Collodion in Scabies.* By J. BOVELL, M.D.

Several authors have lately recommended Tar and fats as remedies against Scabies, their action being to exclude atmospheric air, and thus prevent the propagation of the disease. Having lately had under my care some aggravated cases of Scabies, on which the oils and tar, &c., failed to make much impression, Collodion was substituted with the most marked benefit. In one case the disease had infested the body so extensively, that I was afraid to apply the Collodion at once over the whole service, lest ill effects should follow the occlusion of so large a portion of the cutaneous surface. It was therefore painted first over the chest, back, and arms, and then over other affected parts on alternate days. At the end of the fourth day the affection was completely arrested, and it was only necessary afterwards to cover the little isolated points which shewed themselves.

The Collodion of course acts in a similar manner to the fats and unguents, but *inasmuch as it is a much more cleanly application*, patients of the better class who may happen to become affected with Scabies, would prefer its employment.

TORONTO, JULY 15, 1852.

MEETING OF MEDICAL PRACTITIONERS.

In accordance with the request contained in the Circular addressed to the Profession by DR. WIDMER, about seventy practitioners assembled in the Hall of the Mechanics' Institute on the first of July. In the minutes which are now published, the list of names only shows fifty-two, but there were several others present, who failed to give in their names to the Secretary, although frequently requested to do so. This may have been a politic step on their part, as evincing a desire to shield themselves from any responsibility attaching to the proceedings of the meeting, and was certainly a more gracious way of effecting this object than the course adopted by one individual, who, after having given in his name the first day, and being present at the organization of the meeting, and during a part of the discussion, coolly requested one of his friends on the second day to desire that his name should be expunged from the records of the proceedings. Had the individual in question possessed the hardihood to have attended and made the demand in person, he would have witnessed, what we now endeavour to convey a faint idea of to his mind, the just indignation of every one present, and have heard the well-merited castigation bestowed upon his unjustifiable and insulting request by one of the speakers.

Although there was considerable debate on the several points raised during the proceedings, we believe that every one will agree that the meeting passed off with harmony and good feeling. Few, it would appear, anticipated such a goodly show of Delegates, and all expressed themselves with satisfaction at this the first occasion on which the Profession in the Province had been brought together.

TORONTO, July 1, 1852.

Minutes of a Meeting held at the Mechanics' Institute, by the members of the Medical Profession, in compliance with a Circular addressed to them by the Honble Dr. Widmer.

Dr. Mewburn, of Stamford, addressing the meeting, stated that as Dr. Widmer had called the Profession together, although prevented from attending by indisposition, it was due to him that his name should appear as their President. This proposition was seconded by Dr. Lowe, of Darlington.

Dr. McQueen, of Brockville, then moved, seconded by Dr. Grant, of Yorkville, that Dr. Mewburn be appointed Deputy Chairman.

Dr. Smythe, of Brockville, moved, seconded by Dr. Badgley, of Toronto, that Dr. Melville do act as Secretary.

The Secretary then read a note from Dr. Widmer, announcing his illness, as also several letters from medical men, apologizing for their absence.

The Chairman then stated that as Dr. Widmer had sent an Address which he had prepared, he should direct the Secretary to read it, which was accordingly done.

GENTLEMEN,—It would have been more agreeable to me if one of the younger members of the profession had come forward on the present occasion to invite your attention to the importance of exerting ourselves by a combined effort for ameliorating the condition of the practitioners of medicine in this part of the Province.

Permit me to acknowledge thankfully the courtesy which has prompted so many of you to comply with my request, to assemble for the purpose of deliberating on the subject.

I could not, I am convinced, have proposed for your consideration a matter more worthy of it, or one which would be more likely to secure your best attention. I hope, therefore, the results of our conference will be such as to prove to the public at large that we entertain a desire to elevate the standard of professional character, and by such means to secure and confirm that confidence and respect without which the practice of medicine is vain and unprofitable. I shall not intrude on your time further than to assure you I have stated fully and freely in the letter published convoking this meeting, the motives which actuated me in taking such a step, as well as the reasons why Toronto was selected as the point of assembling. I do this because I learn with regret an impression has gone abroad that the practitioners resident in this city seek to secure for themselves a monopoly of control in the affairs of the contemplated corporation. I can assure you that such an opinion is unfounded and unjust, and I think that every one attending here from the country will return to their respective constituencies with minds completely satisfied that the metropolitan practitioners are consistent and earnest in their desire to promote the general welfare. If it happens that the fortuitous circumstances of Toronto being the capital of the Province, and possessing Schools of Medicine, as well as being the place of meeting of the present Medical Board, should have been brought more prominently before the public practitioners who reside here, and who are all more or less concerned in these institutions, surely this will be recognized to be the natural and usual result of such combined causes. It will be admitted, I think, that such a result is far from objectionable, nay, is indispensable to the efficient working of any association that we may be successful in establishing. It is not to be supposed that the country practitioner can always conveniently leave his

home and practice to attend to the discharge of his corporate duties in a distant place; the onus of management will consequently fall upon those individuals who are nearest to the seat of centralization, and I do not presume any one would seriously contemplate or advocate a peripatetic college.

As we are now assembled, however, with the desire and expressed intention of acting conscientiously for our own good, and the protection of the public; let us strenuously and harmously set ourselves to work to carry out so laudable a design.

I would recommend that our first movement should be directed to obtaining an act of incorporation based upon the same principles as those granted to our Brethren in Lower Canada. We see our neighbours there, treated with liberal legislative enactments; we have applied fruitlessly for the same rights, and our petitions have remained unheeded! We must reiterate our attempt to acquire equal justice, and not cease to agitate until we have attained our object; for we have right on our side, and we cannot fail to succeed if we proclaim that right with our united voices.

Having obtained an act of incorporation, the first step to our progress has been accomplished. We shall then be enabled to form Bye-Laws to regulate the preliminary education of the candidates for legal power to practice.

This is a subject of the first importance, with a view to the general improvement of the rising members of the profession; for without a knowledge of the ancient and some of the modern languages, together with an acquaintance with the collateral sciences, the Student of Medicine cannot arrive at that elevated position in society, which should render him a prominent member of the circle in which he is destined to move.

It is to be regretted that we find ourselves far behind our brethren in the United States in the social intercommunication they so eminently exhibit. We may well endeavour to imitate them in this respect; for the proceedings of their various State medical societies present an instructive lesson for our regard. It is true, that obstacles exist here, from the widely-extended surface over which are spread the practitioners of this province, as contrasted with the denser population of the cities, towns, and rural districts of our neighbors. But, I think, with a little management, and the cultivation of that generous feeling amongst ourselves, which we do not disown, we might present a more united phalanx of professional adhesion than we now do.

One circumstance that will, no doubt, tend to promote so desirable an end, has already been accomplished, namely, the establishment of a professional journal in this city, the progress of which, I am happy to observe, is rapidly expanding, from the tiny form of a pamphlet, to the goodly sized periodical; containing, as it advances, highly interesting matter, destined to circulate not only throughout our own county, but where it has already been recognized and noted—in our own fatherland. If personal communication, from our peculiar situation, cannot be frequently enjoyed, the members of the profession have the opportunity of discussing and interchanging opinions now, with a degree of freedom, through the channel of this journal, which will materially lessen the inconvenience of their widely-extended position; and it is gratifying to observe how many have already availed themselves of this advantage. It may not be out of place here, to remark upon the rapidly advancing progress of the province in population and wealth.

When I settled here, 35 years ago, the prospect was but little encouraging; and many were the moments of doubt and hesitation with me, whether I should not commence a retreat from so unpromising a field; but energy, and the spirit of endurance, came to my aid, and I plodded on through the then muddy streets of this city, and the worse roads of the rural districts. Now, I live to behold a wealthy and populous community, the establishment of a University, and two effective schools of medical science, the rural districts well supplied with professional aid, and the field expanding throughout the land for the advantageous settlement of additional members! When I remark on these changes since my

first location here, I cannot but congratulate you all, and the young beginners most especially, on the altered prospects presented for their exertions; for although, to them, the path may at present be as rugged and difficult as the one I had to travel, it is obvious that the ratio of improvement is fast advancing; and he that finds himself to-day in a remote and unpromising position will, after a short period, be surrounded by a population able and willing to remunerate him for his services.

Quackery, gentlemen, is a bugbear that we need not be afraid of, for, as education is now, so happily, promising to be generally diffused throughout the masses, the public mind will no longer tolerate the assumption of the ignorant pretender; and the well-educated professional man will be sure to obtain that consideration which a discerning community will know he is entitled to receive.

Gentlemen attending as Delegates from Counties, or otherwise, were then requested to hand in their names to the Secretary. When the list was completed the following were ascertained to be present.

Dr. Mewburn, Stanford,
 Dr. Mackelcan, Hamilton,
 Dr. Long, Hamilton,
 Dr. J. K. Crr, Bondhead,
 Dr. Badgley, Toronto,
 Dr. Nichol, Toronto,
 Dr. Lowe, Whitby,
 Dr. Bovell, Toronto,
 Dr. Howe, Darlington,
 Dr. Merrick, Toronto,
 Dr. Crewe, Cookville,
 Dr. Paget, Thornhill,
 Dr. Rees, Toronto,
 Dr. Gunn, Whitby,
 Dr. Burrett, Smith's Falls,
 Dr. Church, Granville,
 Dr. Cotter, Toronto,
 Dr. Turquand, Woodstock,
 Dr. Dallas, Palermo,
 Dr. Gardner,
 Dr. McPherson, Caledonia,
 Dr. Grant, Yorkville,
 Dr. Telfer, Toronto,
 Dr. Barnhart, Streetville,
 Dr. Macklem, Chippewa,
 Dr. Bown, Hamilton,
 Dr. McMicking, Chippewa,
 Dr. Bethune, Toronto,

Dr. Cunningham,
 Dr. Herod,
 Dr. Wolverton,
 Dr. Quick,
 Dr. O'Brien, Toronto,
 Dr. Hodder, Toronto,
 Dr. Beaumont, Toronto,
 Dr. King, Toronto,
 Dr. Fraser,
 Dr. Trener, Toron'co,
 Dr. Crombie,
 Dr. Wright, Marham,
 Dr. Hunter, Newmarket,
 Dr. Geikie, Bondhead,
 Dr. Moore,
 Dr. McGill,
 Dr. Tempest,
 Dr. Langstaff,
 Dr. Durie,
 Dr. Parsons,
 Dr. Pass, Barrie,
 Dr. Jarron, Dunnville,
 Dr. Mitchell, Dundas,
 Dr. Tucker,
 Dr. M. Queen,
 Dr. Smythe, Brockville,
 Dr. Hipkins,
 Dr. Petch,

DR. O'BRIEN then proposed the question as to whether this meeting was to be considered an open one or not. Whereupon DR. MCKELCAN moved, seconded by DR. JARRON :

1. That this meeting be considered an open one, as regards the members of the Press or any other gentlemen desiring to be present; but that the proceedings themselves be confined to qualified members of the profession.—*Carried.*

DR. O'BRIEN then moved, seconded by Dr. TEMPEST :

2. That this meeting believes that some Legislative enactment for the incorporation of a College of Physicians and Surgeons, composed of the legally qualified practitioners of Medicine in the Upper Province, is indispensable for the maintenance of those rights which are enjoyed by them in the Sister Province and in the Mother Country.

It was moved in amendment by DR. JARRON, seconded by DR. FRASER :

"That the existing Acts of the Parliament of the late Province of Upper Canada (59th, Geo. 3rd, chap. 13, and 8th, Geo. 4th, chap. 3) for regulating the practice of Physic, Surgery, and Midwifery in that Province have become unsuited to the state of the country, and altogether inadequate to secure to the community a supply of properly educated practitioners; that it is advisable and necessary that these acts should be repealed, and provisions made by the Legislature for the education of medical practitioners, for prescribing a proper curriculum of study to be followed by all aspirants to the medical profession; and that the conduct, general attainments, and medical knowledge of such aspirants should be tested by one or more examinations, by a board of competent men, before a license to practice the profession in the Province should be granted.

"And it is further necessary to define and fix the terms on which a liberty to practice the medical profession in this Province should be granted to individuals enjoying such privileges in any part or place in Great Britain and Ireland, in virtue of a Medical Degree from any of their local Colleges, or a Diploma, or license to practice the several departments of the profession from local bodies authorized to grant the same; and also that the terms on which foreigners or others holding local rights to practice the profession by virtue of any general or local arrangements of foreign countries should be admitted to practice the profession in this country."

The amendment was then put and lost.

The original motion was put and carried.

DR. TELFER moved, seconded by DR. PAGET :

3. That such Act of Incorporation should vest in the members of the profession the entire management of their own internal government. — That the Corporation should determine the preliminary education of candidate pupils, the duration and course of study, and the qualifications for license, should conduct and make the examination for license, and regulate and control the conduct of its members.

It was moved in amendment by DR. McPherson, seconded by DR. R. J. GUNN :

"That it is necessary to provide for the regulation of the medical profession, and that means should be afforded whereby those who have been examined, and found skillful, by competent authority, may be known from ignorant and unskillful pretenders to the same knowledge."

Amendment lost. Resolution carried.

“That the titles of all medical practitioners at present in this Province, who are legally authorized to practice the several branches of the profession, and of all students and others who shall afterwards be found legally entitled to practice, by the authority appointed for that purpose, shall be uniform.”

It was moved by DR. KING, seconded by DR. ORR :

4. That a petition to the three branches of the Legislature be prepared, and circulated for signature among the members of the profession, praying for such an Act of Incorporation as has been already granted to our brethern in the Lower Province; and that Drs. McKelean, Turquand, Lowe, Mewburn, Badgley, Bovell, Church, Smyth, the Chairman, Deputy Chairman, and Secretary *ex officio*, be a Committee to draft and prepare the same.—*Carried*.

It was moved by DR. MCKELCAN, seconded by LOWE :

5. That the Committee be instructed to draw up the petition in accordance with the resolution,—*Carried*.

It was moved by DR. SMYTHE, seconded by DR. LOWE :

6. That this meeting do form itself into a voluntary association, to be called the Provincial Association of Physicians and Surgeons of Upper Canada; and that the same Committee appointed under the 4th resolution be requested to draft a code of By-Laws for the government of the Association.—*Carried*.

The meeting then adjourned until 10 o'clock to-morrow.

JOHN MEWBURN, *Deputy Chairman*.

HENRY MELVILLE, *Secretary*.

TORONTO, July 2, 1852.

Minutes of a Meeting held by adjournment from the 1st instant, of the Medical Profession of Upper Canada.

DR. MEWBURN took the Chair at 10 o'clock, A. M. The Minutes of the last meeting were then read and confirmed.

The Secretary then read the Report of the Committee appointed to draft a Petition to the Legislature :—

Your Committee appointed to draft a Petition to the three branches of the Legislature, based upon the Resolutions passed at the sitting of yesterday, beg to report the following draft of the same :

To His Excellency the Earl of Elgin and Kincardine, &c., &c.,
Governor General, &c., &c.

The humble Petition of the undersigned, duly licensed Practitioners in Medicine, residing in Upper Canada—respectfully sheweth :—

That while in the Lower Province the members of the Medical Profession are incorporated by an Act of the Provincial Legislature,

passed in the 10th year of Her Majesty's reign, chap. 26, intituled, An Act to incorporate the members of the Medical Profession in Lower Canada, and regulate the study and practice of Physic and Surgery, no such provision exists for the Profession in Upper Canada.

That, from the want of such proper Legislative enactment, the Profession of Medicine in Upper Canada does not enjoy equal advantages with their brethren in Lower Canada.

That such an Act of Incorporation, if passed for the Upper Province, would have the effect of placing the Profession on a better footing, by enabling the College to raise the standard of education, and by such means secure the confidence of the public.

Your petitioners therefore pray that Your Excellency would concur with the other branches of the Legislature in passing an Act similar to that of the Lower Province, and with such alterations only as would render it applicable to the different nature of the territorial divisions of the Upper Province. And your petitioners, as in duty bound, will ever pray.

Your Committee would also suggest for the adoption of the Meeting, the following code of Instructions to the person who shall be engaged in framing the proposed Act, as well as for the guidance of the gentlemen who may be requested to take charge of the same in either House of Parliament.

INSTRUCTIONS :

CLAUSE 1.—Title and preamble of Bill to remain the same, substituting the word "Upper" for "Lower," wherever the latter occurs. After the words "from and after the passing of this Act," page 4, line 3, recite the Acts under which the profession is at present regulated in Upper Canada, and continue from the words "all other acts," page 4, line 14. Omit the last paragraph of the first clause, commencing with the words "provided always," line 31, page 4.

CLAUSE 2.—After the necessary verbal alterations, for the names commencing "Daniel Arnoldi," line 11, page 5, substitute list of licensed practitioners residing in Upper Canada.

CLAUSE 3.—Mere verbal alterations.

CLAUSE 4.—For this clause substitute the following:—That the affairs of the said College shall be conducted by a Board of Governors, in number, who shall be elected in the manner following:—On the first day of _____, in each year, the Medical Practitioners residing in each City, Town, and County, shall assemble for the purpose of electing Governors, by whom the affairs of the said College shall be conducted—that is to say, five for the City of Toronto; three for each of the Cities of Hamilton and Kingston; one for each of the corporate towns in which there shall be resident more than two practitioners; and one for each County.—The said elections to be held at the City or principal corporate Town in each County: and the Governors elected to be *bona fide* residents in such City, Town, or County, which they may be elected to represent.

CLAUSE 6.—Omit last half of clause.

CLAUSE 9.—In this clause insert the following :—That on the first day of January, in every year, the duly licensed practitioners resident in each City, Town, or County, shall enregister his name, age, with the date of his license, and place of residence, with the Clerk of the Peace for the County in which he resides, and obtain a certificate of the same ; and that no person shall be permitted to practice Medicine, Surgery, or Midwifery unless he possess such certificate of enregistration, under a penalty, &c. — to the end of clause.

CLAUSE 10.—Omit sec. 3, page 11. In sec. 4, for “Members,” line 3, substitute “Governors.”

CLAUSE 13.—For the word “Licentiates” substitute “Members.” For the words commencing “be consequently in” substitute “who shall be eligible for election as Governors under the regulations provided for in clause 10, section 4, of this act, provided always, &c.

CLAUSE 15.—Omit.

CLAUSE 16.—Omit the word “demands,” line 4 ; and substitute the word “three” for “five,” line 4, page 16.

Your Committee would also report that, viewing with anticipation the early passing of such an act as that now about to be prayed for, they have delayed reporting upon the rules for the government of the Association of Physicians and Surgeons until the fate of the Bill is determined, inasmuch as any rules or By-Laws framed under such act, would necessarily differ in many particulars from those required by a mere voluntary association, the working of the latter body being equally well regulated by the ordinary rules which guide public meetings and similar institutions.

Your Committee further suggest that, as the Session of the Legislature is near at hand, active measures should at once be adopted to promote the objects of this meeting.

The following gentlemen who were not present yesterday then gave in their names :—

Dr. Hallowell, Dr. Aikins, Dr. Richardson, Dr. Wright, Dr. Workman, Dr. Kellogg.

DR. REES then moved, seconded by DR. HALLOWELL :

That the Draft of the Petition then read be adopted, and engrossed for signature.

It was moved in amendment by DR. JARRON, seconded by DR. McPHERSON :

That the draft of the Petition now read be not adopted, as the proposed Bill contains principles contrary to the provisions that the British Legislature have stated to be necessarily included in such

enactments, for the protection of the public, and that it must also prove an injury to the interests of the members of the Profession themselves.

The amendment was lost, and the original motion carried.

DR. WORKMAN moved, seconded by DR. McPHERSON:

That the Bill, with the suggestions contained in the Report of the Committee, be considered clause by clause.—*Carried.*

The Secretary then read the first clause, with the proposed amendments.

It was moved by DR. MITCHELL, seconded by DR. CROMBY:

That the first clause, as read by the Secretary, be adopted.

It was moved in amendment by DR. WRIGHT, seconded by DR. McPHERSON:

That all the Acts referred to in the clause be repealed.

The amendment was carried.

Much irregular discussion then ensued, in the course of which DR. MITCHELL moved, seconded by DR. BOVELL:

That this Meeting desires to express its regret that the Honble. Dr. Widmer should have been prevented by illness from attending this Meeting, and affording it the benefit of his talent and experience.

Carried nem. con., the meeting rising.

After some further discussion, it was moved by DR. TURQUAND, seconded by DR. KELLOGG, of Mariposa:

That the Bill reported by the Committee be adopted and carried into effect by the members of that Committee, as intended by the Meeting on the 1st instant.

This motion was carried.

It was then moved that Dr. Crombie do take the Chair.

It was then moved by DR. JARRON, seconded by DR. MITCHELL:

That the thanks of the Meeting be tendered to Dr. Mewburn, for his conduct in the Chair.

It was moved by DR. WORKMAN, seconded by DR. HUNTER:

That the thanks of this Meeting be given to Dr. Melville, for his services as Secretary.

It was moved by DR. JARRON, seconded by DR. WRIGHT:

That this Meeting do adjourn until the first Wednesday in September.

JOHN MEWBURN, *Chairman.*

NORFOLK MEDICAL ASSOCIATION.

At a meeting of the medical practitioners held in Simcoe, (County of Norfolk), on Tuesday, 22nd June, called for the purpose of responding to the invitation of the Honble. C. Widmer, it was passed unanimously—That Drs. Crouse and Coverton be our delegates, and they are hereby requested to represent the profession located in this section of the Province at the meeting convened by Dr. Widmer for the 1st of July next ensuing.

After the special business was transacted, and Dr. Coverton called to the chair, it was resolved and carried—

1st. That a Medical Association be formed, to be called the "Norfolk Medical Association," to be composed of all legally qualified Medical Practitioners residing within the limits of the Association.

2nd. That after the commencement of the ensuing year, every person desiring admission into this Association, shall be required to present credentials, proving him to be legally qualified to practice Medicine and Surgery, upon presentation of which, and payment of the annual fee, he is entitled to a seat in the Association.

3rd. That the first annual meeting of the Association shall be held in Simcoe on Monday, the 6th of July ensuing; and all subsequent meetings shall be held as decided on at last meeting preceding. The entrance fee to be 10s. per annum.

4th. That the management of the Association be confided to a Committee, composed of the President, Secretary, and Treasurer, and the following gentlemen, viz:—Dr. Wilson, Simcoe; Dr. Duncombe, Waterford; Dr. Bowlby, do.; Dr. King, Port Rowan; Dr. Phelan, do.; Dr. Culver, Vittoria; Dr. Segur, Port Dover—five to form a quorum. The officers and committee to be elected annually. The following gentlemen were proposed for election at the next meeting, viz:—President, Dr. Crouse; Treasurer, Dr. Coverton; Secretary, Dr. Clarke.

5th. That the senior members shall preside in rotation; seniority to be calculated from the date of Degree, Diploma, or License. And that at each meeting the members present shall be invited to propose some subject for conversation and discussion at the following meeting; selection to be made by the President.

6th. That interesting communications from gentlemen not members of the Association will be gladly received through its Secretary, to be brought before the notice of the Association, by reading and discussion.

7th. That young men, students of medicine with any legally qualified medical practitioner, shall be admitted as spectators at the meetings of the Association.

8th. That the objects contemplated by the members of this Association are—a more general personal acquaintance and intimacy

amongst the members of the profession than at present exists, and, perhaps, the diffusion of a more kindly feeling—the improvement which invariably results from the association and frequent intercourse of professional men—and the weight with which, as an Association, they may prefer any application for professional objects to the Legislature.

Signed, by order and on behalf of the meeting.

JOHN CLARKE, *Secretary.*

The following gentlemen gave in their adhesion to the above resolutions and constitution, viz :—Dr. Coverton, Dr. Walker, Dr. Phelan, Dr. King, Dr. Culver, Dr. Croise, Dr. Bowlby, Dr. Clarke.

TRINITY COLLEGE.

We insert in this number a wood-cut of Trinity College. The Medical Faculty will occupy the class rooms on the eastern side of the building. It is also our intention to give similar illustrations of the other Schools in Toronto, as soon as we can obtain wood-cuts of them. The buildings of the University of Toronto are beautifully situated: and in that Institution the Medical Faculty are accommodated in a handsome white brick building, detached from the main one; it has very fine Lecture rooms, and a lofty, well-aired dissecting room. Dr. Rolph's School, situate on Queen street, has also been repaired, and last year additional accommodation was provided.

The Parliament is just on the eve of assembling for the despatch of business, and we sincerely hope that they will not allow the session to wane ere they take the question of Medical Reform into consideration. We cannot ourselves see any very great difficulty surrounding the matter, and therefore urge on the Commissioner of Crown Lands the necessity of his moving in it. The Legal Profession have their Osgoode Hall, and they insist on examining all candidates, whether they have a license or degree,—why not give the Medical Profession a precisely parallel institution for Upper Canada, and thus have *one* Board for the whole Upper Province.

MONTHLY METEOROLOGICAL REGISTER, at

Latitude, 43 deg. 39.4 min. N. Longitude, 79 deg. 21.5 min. W.

| Mgt. | Day | Barom. at tem. of 32° deg. | | | | Temperature of the air | | | | Density of Vapour | | | |
|-------|-----------|----------------------------|--------|---------|--------|------------------------|--------|---------|-------|-------------------|--------|---------|-------|
| | | 6 A.M. | 2 P.M. | 10 P.M. | MEAN | 6 A.M. | 2 P.M. | 10 P.M. | MEAN | 6 A.M. | 2 P.M. | 10 P.M. | MEAN |
| a | 1 | 0.619 | 0.102 | 0.168 | 0.104 | 1.2 | 0.7 | 2.6 | 1.8 | 0.304 | 0.323 | 0.287 | 0.297 |
| b | 2 | 0.293 | 0.293 | 0.3.7 | 0.309 | 1.4 | 16.8 | 11.5 | 10.5 | 3.47 | 5.38 | 2.42 | 3.82 |
| c | 3 | 0.366 | 0.262 | 0.111 | 0.224 | 5.5 | 7.5 | 1.4 | 3.7 | 4.31 | 3.98 | 2.56 | 3.56 |
| c | 4 | 0.041 | 0.073 | 0.186 | 0.080 | 3.4 | 6.9 | 7.2 | 6.5 | 1.95 | 2.19 | 1.85 | 1.86 |
| c | 5 | 0.145 | 0.84 | 0.004 | 0.070 | 6.7 | 2.0 | 4.7 | 4.9 | 2.05 | 2.67 | 2.58 | 2.47 |
| b | 6 | 0.115 | 0.274 | ..... | ..... | 3.7 | 2.0 | ..... | ..... | 2.56 | 3.19 | ..... | ..... |
| b | 7 | 0.347 | 0.301 | 0.243 | 0.291 | 0.9 | 5.0 | 4.1 | 1.8 | 3.87 | 4.63 | 3.71 | 3.92 |
| c | 8 | 0.261 | 0.331 | 0.504 | 0.395 | 1.6 | 4.2 | 2.6 | 1.5 | 3.28 | 4.29 | 4.43 | 3.94 |
| c | 9 | 0.579 | 0.102 | 0.271 | 0.402 | 6.0 | 1.4 | 2.8 | 1.6 | 3.65 | 4.59 | 3.45 | 3.80 |
| b-c | 10 | 0.297 | 0.074 | 0.229 | 0.016 | 7.3 | 14.3 | 11.8 | 11.5 | 2.90 | 2.69 | 2.41 | 2.58 |
| c | 11 | 0.59 | 0.315 | 0.315 | 0.313 | 8.6 | 5.4 | 3.0 | 5.8 | 1.85 | 2.88 | 3.28 | 2.76 |
| c | 12 | 0.339 | 0.311 | 0.298 | 0.314 | 3.4 | 3.6 | 4.9 | 4.4 | 3.45 | 3.95 | 3.17 | 3.59 |
| b | 13 | 0.285 | 0.276 | ..... | ..... | 2.2 | 2.0 | ..... | ..... | 3.12 | 4.60 | ..... | ..... |
| b | 14 | 0.271 | 0.257 | 0.208 | 0.243 | 5.1 | 14.2 | 9.8 | 9.5 | 4.47 | 7.63 | 5.13 | 5.98 |
| b-d | 15 | 0.209 | 0.155 | 0.120 | 0.158 | 10.3 | 14.7 | 3.6 | 13.1 | 5.87 | 7.69 | 6.91 | 6.80 |
| c-e | 16 | 0.095 | 0.046 | 0.044 | 0.062 | 14.1 | 12.2 | 9.8 | 14.9 | 6.38 | 6.68 | 5.47 | 5.90 |
| c | 17 | 0.017 | 0.151 | 0.115 | 0.096 | 8.5 | 3.9 | 0.9 | 6.1 | 3.31 | 6.65 | 6.69 | 5.92 |
| c | 18 | 0.109 | 0.157 | 0.071 | 0.105 | 7.8 | 6.0 | 1.3 | 5.3 | 5.19 | 5.44 | 3.97 | 4.46 |
| b-c | 19 | 0.181 | 0.108 | 0.101 | 0.092 | 4.7 | 0.9 | 2.6 | 0.6 | 4.27 | 4.75 | 3.42 | 4.1 |
| a-b | 20 | 0.102 | 0.141 | ..... | ..... | 3.8 | 3.7 | ..... | ..... | 4.57 | 4.97 | ..... | ..... |
| a | 21 | 0.091 | 0.2.9 | 0.395 | 0.245 | 1.3 | 4.7 | 2.6 | 0.8 | 4.01 | 3.49 | 4.60 | 4.35 |
| b | 22 | 0.327 | 0.321 | 0.119 | 0.241 | 2.5 | 0.3 | 5.5 | 1.9 | 4.60 | 2.65 | 3.20 | 3.34 |
| b | 23 | 0.108 | 0.080 | 0.004 | 0.154 | 5.4 | 2.0 | 4.6 | 4.0 | 2.53 | 3.06 | 3.03 | 3.03 |
| a | 24 | 0.062 | 0.150 | 0.124 | 0.106 | 8.2 | 12.0 | 8.3 | 8.2 | 2.91 | 4.10 | 2.82 | 3.33 |
| b | 25 | 0.039 | 0.125 | 0.158 | 0.119 | 6.6 | 3.9 | 5.7 | 5.0 | 2.71 | 2.55 | 2.55 | 2.58 |
| a | 26 | 0.137 | 0.062 | 0.081 | 0.092 | 9.0 | 6.8 | 0.2 | 0.8 | 2.89 | 3.36 | 3.58 | 3.37 |
| b | 27 | 0.037 | 0.011 | ..... | ..... | 2.4 | 0.3 | ..... | ..... | 3.9 | 4.00 | ..... | ..... |
| c | 28 | 0.025 | 0.091 | 0.016 | 0.099 | 0.9 | 3.1 | 3.0 | 0.4 | 4.02 | 5.30 | 4.01 | 4.37 |
| c | 29 | 0.096 | 0.135 | 0.167 | 0.131 | 0.2 | 5.3 | 0.6 | 0.5 | 4.25 | 5.21 | 4.77 | 4.67 |
| c | 30 | 0.159 | 0.101 | 0.049 | 0.082 | 0.2 | 0.2 | 0.1 | 0.2 | 4.65 | 6.23 | 3.63 | 4.90 |
| Mean: | Normal... | 29.95 | 29.572 | 29.572 | 29.576 | 55.98 | 65.27 | 57.39 | 61.19 | 3.75 | 4.41 | 3.70 | 3.96 |
| | Observed | 29.535 | 29.515 | 29.523 | 29.522 | 55.37 | 68.42 | 56.78 | 60.88 | ..... | ..... | ..... | ..... |

Highest Barometer .. 29.918, at 8 a. m. on 12th } Monthly range.

Lowest Barometer... 28.973, at midnight on 24th } 0.965 inch.

Highest observ'd temper're 85° F., at 3 p.m. on 16th } Monthly range

Lowest registered " 37.2 at a m. on 4th } 48° F.

Mean highest observed temp. 69° 42' } Mean daily range:

Mean registered minimum 51.34 } 18° .08

Greatest daily range, 29° .1, from 2 p.m. 23d to a.m. of 24th.

Warmest day, 15th. Mean temperature, 74° 33' } Difference,

Coldest day, 10th. Mean temperature, 48.10 } 26° .23

Fire Flies first observed on the evening of the 5th.

Very brilliant Meteor in S. W. at 9h. 0m. 30s. p.m.

The present "Means" are derived from six observations daily, viz.—at 6 and 8, a m.; 2, 4, 10, and 12, p. m. The observations of the Barometer and Thermometer are taken *as above or below the mean*, the quantities in the latter case being marked —. See this Journal, May 1852.

(a) A marked absence of Magnetical disturbance.

(b) Unimportant movements,—not to be called disturbance.

(c) Marked disturbance,—whether shewn by frequency or amount of deviation from the normal curve,—but of no great importance.

(d) A greater degree of disturbance,—but not of long continuance.

(e) Considerable disturbance,—lasting more or less the whole day.

(f) A magnetical disturbance of the first class.

The day is reckoned from noon to noon. If two letters are placed, the first applies to the earlier, the latter to the later part of the trace. Although the declination is particularly referred to, it rarely happens that the same terms are not applicable to the changes of the horizontal force also.

H.M. Magnetical Observatory, Toronto, C. W.—JUNE, 1859.

Elevation above Lake Ontario, 108 feet.

| Humidity of Air | | | | WIND | | | Rain Inches | WEATHER. |
|-----------------|------|-----|-----|--------|--------|---------|----------------|--|
| 6 AM | 2 PM | 10 | Mo | 6 A.M. | 2 P.M. | 10 P.M. | | |
| .85 | .67 | .81 | .71 | Calm | Calm | Calm | 0.510 | Lt clouds, halo r'd m'n at midt, rain dug night |
| 87 | 55 | 38 | 58 | Calm | WSW | S b W | 0.420 | Clear & fine, thunder, lightn'g rain, fm 10-15pm |
| 93 | 51 | 60 | 67 | SE b S | W | NW | ... | Slight rain till 9 a.m., light clouds during the day |
| 53 | 47 | 49 | 54 | N b W | NW b N | NW b N | ... | Unclothed, clear and very fine day |
| 68 | 47 | 74 | 61 | Calm | S b E | SW b S | ... | Unclothed, faint aur light fm 10 p.m.; very fine |
| 80 | 64 | ... | ... | Calm | S b W | Calm | 0.305 | Overcast; thun lightn'g, rain 8t-9pm, rn d'g nig't |
| 94 | 78 | 88 | 87 | Calm | S | S | ... | Clouded till 2 p.m., afterwards mostly clear. |
| 85 | 78 | 97 | 86 | Calm | E | N b E | 0.35 | Overcast, dull & gl'my, rain gm 7pm, & dg night |
| 90 | 77 | 84 | 82 | WSW | SSW | NL b N | 0.625 | Overcast, shower at noon, rain gm 10pm all n't |
| 91 | 70 | 84 | 79 | S | NW | Calm | 0.010 | Rain ceased sat, wind ch'g'd N.W. clear fm 3pm |
| 60 | 51 | 84 | 67 | NW | S b E | " | in app | Generally clear, fine, aur. light from 9-10 p.m. |
| 93 | 69 | 93 | 83 | Calm | Z b S | " | ... | Unclothed from 8 a.m., but rather hazy. |
| 84 | 75 | ... | ... | NE | E | E b N | ... | Clear a.m., light clouds and haze dispersed p.m. |
| 86 | 73 | 85 | 82 | Calm | S b E | NE b E | ... | Unclothed, hazy round horizon, sultry |
| 93 | 71 | 97 | 84 | Calm | SSE | F b S | ... | Clouds, hazy, showers 5pm, aur from 9-45 pm. |
| 88 | 65 | 84 | 73 | Calm | S b W | Calm | 0.107 | Light passing clouds, faint aur 9 to 10 p.m. |
| 89 | 86 | 90 | 83 | Calm | SE b S | " | 0.010 | Showers 8 to 9 am, and 1 1/2 to noon; aur 9-30 pm. |
| 84 | 64 | 81 | 71 | Calm | SE b S | " | ... | Light showers passing, mostly clear, aur. 10 p.m. |
| 81 | 71 | 79 | 76 | Calm | E | N b E | ... | Generally clear; thunder in NW from 2-30 p.m. |
| 87 | 64 | ... | ... | Calm | SE | Calm | ... | A.m. clear, p.m. light clouds dispersed, fine. |
| 94 | 64 | 88 | 77 | Calm | ESE | SSF | in app | Clouded, thunder & lightn'g 10 pm to 1 am. |
| 81 | 38 | 81 | 67 | W b S | W | W b N | ... | Dense detached clouds dispersed, wind squally. |
| 66 | 41 | 74 | 64 | WNW | W b N | SW | ... | Light clouds dispersed; fine. |
| 84 | 91 | 78 | 84 | Calm | S b E | W b S | 0.250 | Overcast, raining heavily from 1-3 to 3-30 p.m. |
| 73 | 41 | 64 | 56 | NW | NW b N | Calm | ... | Mostly clear, a few light clouds dispersed; fine. |
| 85 | 37 | 71 | 62 | Calm | SSW | " | ... | A few light passing clouds, mostly clear; fine. |
| 77 | 64 | ... | ... | Calm | SSW | W | ... | Overcast, dull, a few clear spaces. |
| 87 | 66 | 90 | 78 | N b W | Calm | Calm | ... | Unclothed, hazy, very dull at 10pm & midnight |
| 89 | 85 | 92 | 81 | Calm | " | " | 0.300 | Thunder returns. Rain, 1-30 pm, to 12-40 p.m. |
| 97 | 85 | 72 | 84 | W b S | S b W | W b N | ... | Rain ceased 6-30am, day clear, passing clouds. |
| .81 | .64 | .79 | .74 | Miles: | Miles: | Miles: | 3.160 | |

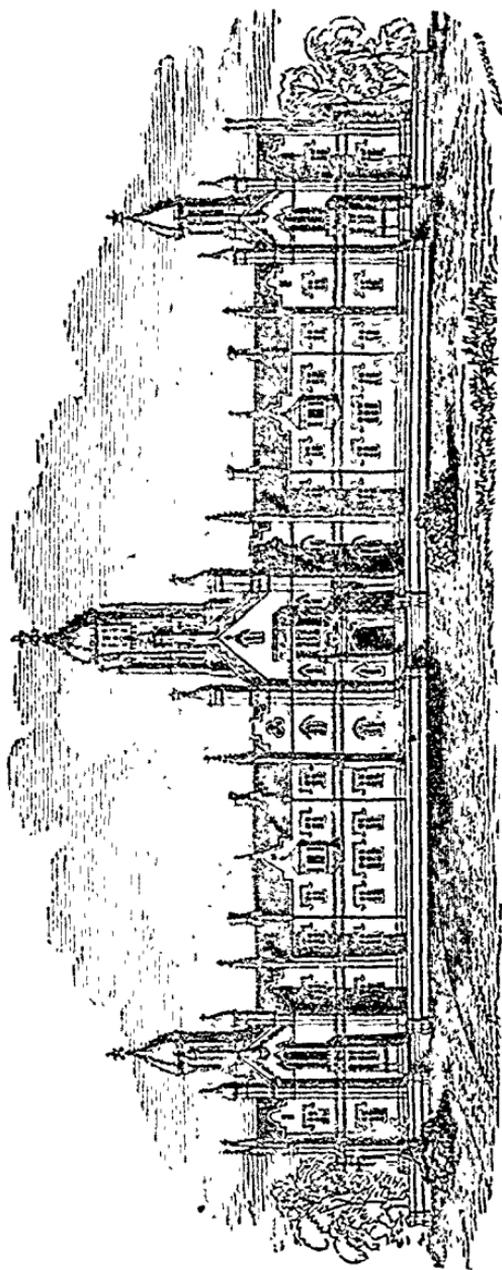
Sum of the Atmospheric Current in Miles, resolved into the four Cardinal Directions:

| | | | |
|--------|---------|---------|--------|
| North. | West | South. | East. |
| 805.45 | 1306.66 | 1048.91 | 360.63 |

Mean velocity of the wind—4.69 miles per hour.
 Max. velocity—23.6 miles per hour, from 4 to 5 p.m. on 22nd.
 Most windy day—22nd. mean velocity—12.28 miles per hour.
 Least windy day—1st. mean velocity—0.36 ditto.
 Most windy hour—3 p.m. mean velocity—7.18 ditto.
 Least windy hour—11 p.m.: do. —1.55 ditto.
 Mean diurnal variation—5.63 miles.

COMPARATIVE STATEMENT.

| Year | TEMPERATURE | | | | Days | RAIN Inches | Wind. Mean velocity |
|------|-------------|-------|-------|-------|------|----------------|------------------------|
| | Mean. | Max. | Min. | Range | | | |
| 1840 | 59.81 | 78.5 | 37.1 | 41.4 | 11 | 4.860 | Miles. |
| 1841 | 65.53 | 92.8 | 45.7 | 47.1 | 9 | 1.760 | |
| 1842 | 55.98 | 73.9 | 28.1 | 45.9 | 15 | 5.755 | |
| 1843 | 58.44 | 81.3 | 28.5 | 52.8 | 12 | 4.595 | |
| 1844 | 59.94 | 82.8 | 33.1 | 49.7 | 9 | 3.535 | |
| 1845 | 60.78 | 83.6 | 40.9 | 42.7 | 11 | 3.715 | |
| 1846 | 63.17 | 81.3 | 41.5 | 41.8 | 10 | 1.920 | |
| 1847 | 58.45 | 78.3 | 36.7 | 41.6 | 14 | 2.625 | |
| 1848 | 62.89 | 92.5 | 38.3 | 54.2 | 8 | 18.0 | 4.51 |
| 1849 | 63.30 | 84.9 | 45.2 | 39.7 | 7 | 2.020 | 3.32 |
| 1850 | 64.76 | 83.2 | 49.0 | 34.2 | 16 | 3.345 | 4.74 |
| 1851 | 59.77 | 79.2 | 41.2 | 38.0 | 11 | 2.695 | 4.42 |
| 1852 | 60.88 | 80.1 | 41.6 | 42.5 | 19 | 3.160 | 4.09 |
| Mean | 61.09 | 83.11 | 39.14 | 43.97 | 10.5 | 3.159 | 4.18. |



TRINITY COLLEGE, FRONT ELEVATION.