The question was promptly answered in the negative. The Section then adjourned until 9 o'clock June 8.

SECOND DAY—WEDNESDAY, JUNE 8.—MORNING SESSION.

The first paper of the morning was

POSITIVE AND NEGATIVE RESULTS OF MEDICAL ACTION.

BY BEDFORD BROWN, M.D.,
OF ALEXANDRIA, VA.

EX-PRESIDENT OF THE MEDICAL SOCIETY OF VIRGINIA, MEMBER OF THE MEDICAL EXAMINING BOARD OF VIRGINIA, MEMBER OF SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION, AND OF THE AMERICAN MEDICAL ASSOCIATION.

I have long been impressed with the importance of studying and clearly comprehending in the application of our therapeutic agents, the positive or negative, the certain or uncertain action of our remedies. It may be said now that this is a question duly considered by every intelligent physician. I think that I can demonstrate to you during the course of this paper that this question, even at the hands of intelligent, competent physicians, does not always receive the consideration that it merits.

This question of the positive and negative results of medical action is eminently a practical one. The more closely one may calculate upon and approach certainty of results in medical action the better will be our results in the treatment of disease.

On the contrary, the less attention we pay this important question, the less weight we attach to the character and action of our remedies, the more unfavorable will be the results of our practice.

In summing up an aggregate of the fatal cases in practice we will find that a certain proportion is due to the incompetency of the physician, incorrectness of diagnosis and ignorance of appropriate therapeutics; another proportion from the incurable character of disease, and another still from carelessness of physician and nurse.

But, notwithstanding our diagnosis may be correct, and our therapeutics proper, and we may be entirely competent to treat disease, our success in its treatment may be signally defeated and the results of our medication may be absolutely negative, because of the manner in which our prescriptions are compounded; because of the adulteration in the manufacture of drugs or the substitution of cheap and inferior preparations for those of a standard quality and value.

In these may be found some of the principal causes of the negative results of medical action and of the uncertainties of medicine. A single dose of a worthless, inert, impure, adulterated or insoluble or inferior substituted medicine may cost the patient his life, and the attending physician his reputation. The reputation of the physician is his capital, and that capital is acquired alone by his success in practice. In the acquisition and preservation of the capital it behooves him, like the banker or merchant, to look to the details of practice and to know more than the certain and positive actions of his remedies. If he finds his cases retrograding in progress, there is surely an error somewhere, either in his diagnosis, in the selection of his remedies, in the nursing, or in the character of those remedies, or in the method by which they are prepared. In the administration of therapeutic agents their action must be either positive or negative, and the results either good or bad.

In treating of the subject of negative medication, one of the first and most important questions for con-

sideration is the solubility or insolubility of medicines in the human stomach.

The pill is probably the pharmaceutical preparation in most general use, and of all others is the most liable to be prepared in an insoluble manner. No one can well over-estimate the importance of the simple question of the solubility or insolubility of the *pill* in the practice of medicine, in the results of treating disease. There can be no doubt that a very considerable proportion of the medicines prescribed in the form of the pill are absolutely insoluble in the human stomach. And so far as any remedial action is concerned they as well might have been dispensed with. Of course, such medicines can exert no influence one way or the other, for good or evil, on the progress of the case, whether it terminates fatally or not.

In regard to the use of insoluble pills and capsules in treating disease, my attention was called to this subject some twelve years since in a most positive, but unpleasant manner, and I cannot impress the subject upon the attention of the audience better than by relating a history of the circumstances.

I had under my care a very bright and interesting boy of fourteen, with a most violent form of adynamic malarial fever. I was prescribing twenty grains of quinine per day in divided doses, in what was intended to be fresh pill form.

Instead of fresh pills, the druggist had, as I discovered only too late, been dispensing sugar coated stale pills. The temperature of my patient, most unaccountably to me, notwithstanding the regular administration of this quantity of quinine, was daily increasing. I increased the quantity to thirty grains per day and obtained no better results. On the contrary, the temperature rose to 105° accompanied with delirium, great prostration and dry tongue. In addition I used other antipyretics and frequent cold sponging. Very suddenly the temperature leaped up to 106°, and as the child was then suffering much from diarrhoea I asked to see the alvine discharge. In the discharge examined I discovered two or three small white balls. They were washed and examined, and found to be sugar coated quinine pills perfectly undissolved. The mother informed me that she had observed those lumps, as she termed them, in all the discharges when examined, but supposed they were peculiar to the disease. There was an explanation of my patient's steady and downward progress. Probably not a pill had been dissolved in the stomach and not a grain of quinine had been absorbed into the system. My patient was lost, not from incorrect diagnosis, not from the prescription of improper medicine, not from careless or ignorant nursing, but from the use of an insoluble pill. Subsequently to this I was attending an interesting little girl of twelve, with malarial fever. I observed at my daily visits that the condition of my patient was growing worse, notwithstanding she was then taking twenty grains of quinine per day in pill form. I had ordered from the druggist some freshly prepared quinine pills. The temperature of my patient now rose to 104½° on the border lines of danger. At this stage, as the child was suffering from diarrhoea, I inspected the discharge and found two undissolved pills. On inquiry the mother informed me that she had observed them in almost every discharge, but supposed them to be peculiar to the disease. I called on the druggist in person and found that he had been

dispensing throughout the case sugar coated pills. I then ordered fresh pills to be made, but unfortunately they were compounded with gum arabic, and the next day they were also found in the alvine discharges in an undissolved condition.

I now prescribed twenty grains of quinine in solution per day, and in twenty-four hours the condition of my patient was better, and her subsequent progress was uninterrupted. The only excipient I have found that would render a pill perfectly soluble in all grave forms of fever, is pure *honey*. Gum arabic, gum tragacanth, even sugar will render a pill insoluble in these conditions.

In the grave and malignant forms of fever the functions of digestion are reduced to a minimum, and the capacity to dissolve either food or medicine is diminished to the lowest degree.

To a digestion impaired to this degree we must be careful to adapt the solubility of our medicine. To patients with these grave forms of disease, I order only pills freshly prepared with simple honey or glycerine. I have inspected the discharges of patients repeatedly when taking pills prepared in this manner, and never found one undissolved.

Indeed, in the grave types of fever of all descriptions where certain organic changes of the mucous membrane of the alimentary canal have taken place, rendering them incapable of performing their proper functions, and the great sympathetic system is partially paralyzed for the time, they are not in a condition to dissolve a pill in any form, and then medicine in solution can be given, and I prefer quinine in a solution of muriatic acid. In this condition of affairs to give an insoluble pill is to permit your patient to die. When the temperature of our patient reaches 104° , his condition is growing serious and he needs medicine in a form that will act promptly and speedily. When it rises to 105° he is on the border lines of danger, and when 106° is attained I trust not medicine in pill form, as a stomach at a temperature of 106° will hardly dissolve a pill twelve hours old sufficiently rapid to meet so grave an emergency. Then the antipyretics must be given either in solution or powder. I feel satisfied from my own personal experience that a certain proportion of human lives have been sacrificed from neglect of this principal alone.

In these alarming conditions we cannot trust the lives of our patients to the uncertain chances of the solubility of a stale sugar or gelatine coated pill or capsule.

I have on repeated occasions when the temperature had reached dangerous limits, and the alimentary canal was incapable of dissolving a pill, and rejected a solution of quinine, given, by enema in mucilage, that article in thirty grain doses with the happiest effect.

During an epidemic of grave malarial fever I had a case of specially malignant type with a temperature of 106° that had been taking twenty-five or thirty grains of quinine without effect in pill form. I ordered an enema containing forty grains of quinine in a gill of milk and thirty drops of tincture of opium. The temperature fell to 103° in twelve hours, and then in twelve hours more to 101° on repetition of the enema. These details would seem to be of small importance, but in the treatment of disease they are of practical worth.

There is a question that arises now whether the

cool bath in very high temperature does not aid the digestive organs in dissolving both medicine and food. I believe that it does promote that object. The hurry and bustle of the age, the desire to economize time and labor, and the thirst for gain are responsible for much of the delinquencies of both manufacturers and druggists. For the past twenty years the country has been flooded with sugar and gelatine coated pills and capsules that are kept and dispensed in a stale and too often insoluble condition to fill prescriptions for the very gravest as well as the mildest cases. It behooves us to look well to the solubility of our remedies given in all grave forms of disease as typhoid or malarial fever, pneumonia, dysentery, cholera morbus, diarrhoea and in all other cases where the vital condition is reduced to a low standard, or we may surely expect to obtain negative medication and unfortunate results. For the purpose of illustrating more clearly the important principle involved in this question, I think it proper to recur again to the relative capacity of the digestive organs in disease to dissolve solid substances. For instance, I have known a hard stale pill to remain in the stomach for twenty-four hours and then be rejected in an undissolved state. I have known a portion of crust of bread to remain fifteen hours and then to be rejected without having undergone digestion. I have known in the case of a child a portion of green apple to remain twenty hours undigested after being swallowed, and then rejected by an emetic. I have seen a hard portion of fruit cake to remain in the stomach undigested for nearly twenty hours, and then came convulsions that were relieved by its final rejection. Even in transient conditions of indigestion the capacity to dissolve solid substances is greatly reduced. To recur again to the question of the solubility of the pill, while it is true that a perfectly healthy stomach and vigorous digestion might dissolve even the stalest sugar or gelatine coated pill, in a large proportion of cases they would pass through an entire alimentary canal in a state of disease, with its vital standard reduced, and our object would be defeated and the result of our medication would be *nil*. In the prescription and administration of medicine and food in grave forms of disease how few of us take into consideration the lowered standard or capacity of the stomach to dissolve ingesta. But there are various other agencies of equal importance by which we can derive negative results in the application of our remedies.

The criminal adulteration of drugs by dishonest manufacturers is another means not less important and more reprehensible. For this our profession is, in part, to blame, as they too often encourage obscure, unscientific, dishonest manufacturers, simply because their productions are cheaper. The laity is always captivated by cheap drugs. To them the opportunity to purchase cheap medicine is that much saved. They are prone to regard cheap medicine in the light of a bargain as they would cheap groceries or cheap dry goods. This crime of adulteration of drugs might be in a measure, if not wholly, corrected if medical men and patients would patronize alone honest, skilled manufacturers and druggists.

There is a popular delusion that cheap druggists and cheap drugs, like cheap groceries and cheap clothing, are profitable things to patronize. The profession should in every manner possible endeavor to correct this delusion. This is the cause of an infinite

amount of injury in defeating positive and certain medication.

Pure drugs always command a standard value and no pure drug can be sold for less than the standard price without loss. Hence, the very fact that drugs are sold cheap is an evidence of their impurity. The practicing physician should condemn and seek to avoid cheap druggists and cheap drugs as dangerous things to the success of his practice.

This crime of adulterating medicine and the dispensing of cheap, inferior and inefficient medicine has lost many patients their lives, and physicians their reputations.

To the honest, skilful manufacturer and druggist, both the profession and patients owe a great and lasting debt of gratitude. It is a genuine true pleasure and satisfaction to know that our prescriptions fall into the hands of such men.

There are pharmaceutical manufacturers whose productions never fail to come up to the correct standard, and druggists who never fail to compound their preparations correctly. It is only too true that there are others that cannot be depended upon. There should ever be existing a close, mutual relationship and confidence between the physician and druggist. It is of importance and advantage to both, and equally to the interests of both professions. As a means also of promoting negative medication, I desire to allude here to another criminal act on the part of dishonest druggists, the substitution of inferior and cheaper articles in filling prescriptions for those of purity and standard value. No one but a dishonest druggist could do this. And the man who would be guilty of committing this act would not hesitate to commit any other dishonest deed. He could not be trusted in anything. Yet we know that it is a not uncommon vice that our profession has to contend with. And it has been, and is being the means of defeating our success in our daily practice, and is an obstacle exceedingly difficult to deal with. The substitutor of drugs does not make a boast of dispensing cheap medicine, but sells for full price, and makes full profits, and until he renders himself liable to suspicion, makes his rascally business profitable at the expense of human life and professional reputation. When we order such elegant and pure drugs as Squibbs' chloroform, ether, ergot, we know what we are using. We expect certain positive effects and results. But when the dishonest druggist substitutes an inferior for a pure article, both the patient and physician are at his mercy. But, nevertheless, he goes on reaping enormous profits from his nefarious practice.

The great majority of druggists are honorable, high-minded men, competent in their profession, who would scorn to commit a dishonest act. But it is only too true that there is another class who are not above the grade of disreputable tricksters in the commonest and lowest trades of life. In this way the druggist who is guilty of substituting becomes an efficient agent for the promotion of negative medication.

In the past fifteen or twenty years there has sprung up all over the country, from hundreds of manufacturers, vaunted remedies under the title of "uterine tonics," for the cure of organic uterine disease. Under different appellations these preparations are sold and swallowed by the hundreds of gallons by females who are, or imagine themselves suffering

from uterine disease. And these preparations are encouraged and prescribed by practicing physicians. I believe this to be one of the patent examples of negative medication.

I do not believe that there is on record a single instance of the cure of organic uterine disease by these remedies. Ergot has power to control uterine hæmorrhage and induce uterine contraction. Beyond these its therapeutic powers does not extend. Yet year after year the physician continues to lavishly prescribe these proprietary preparations when he must know that his results are negative. A remedy of this kind only has to be put upon the market and vaunted as a specific to meet with ready encouragement. The eagerness with which these remedies are caught up and used indicates the great difficulty of treating this class of affections and the disposition of our profession to catch at new and unknown remedies.

There is another subject of importance which is well calculated to defeat the positive action of our remedies, and I have no doubt has often been the means of obstructing our successful practice. I allude here to the common custom by druggists of the present time to facilitate business, of preparing decoctions and infusions of vegetable remedies from extracts often stale, or worthless. Many of our most important and efficient remedies are administered in this form. For instance the infusions of digitalis and ergot are remedies applicable to the treatment of some of the most dangerous forms of disease. Yet how common has it been in my own experience for an infusion or decoction of these drugs to be prepared from a worthless extract that fails to exert any positive action whatever. This is a question of such vital importance, the profession cannot afford to ignore it. I have on numerous occasions prescribed an infusion of digitalis in organic heart affection or pneumonitis and obtained not the least positive effect, and on inquiry found that the druggist occupied just ten minutes in making the preparation, when it should require one and a half hours to prepare an infusion or decoction from the leaf of the plant.

I then ordered an infusion from another druggist to be prepared in the proper manner, and found it all that could be desired. In the case of a female patient, long the subject of cardiac valvular disease, when extensive dropsical symptoms had supervened, I prescribed the infusion, or rather decoction of digitalis. The patient stated that digitalis would not benefit her in any form as she had taken it previously both in tincture and decoction without benefit. I then called on a skilled and reliable druggist and directed him to prepare for her a decoction from the digitalis leaf and consume an hour and a half in the preparation. The effects of this preparation after being administered twenty-four hours were of a most positive character, both on the heart and kidneys, and were such as to astonish my patient. That was twelve months ago, and there has been no return of dropsical symptoms since. The history of this case affords a very satisfactory example of the negative and positive action from the same remedy prepared in a different manner.

Thus, by different methods of preparing the same remedy we may obtain the most opposite results. The patient alluded to above, I discovered on investigation had formerly used tinctures and infusions prepared from fluid extracts only, which the drug-

gist had made hastily in five or ten minutes, and was ignorant of the fact that he had furnished a worthless preparation and was impressed with the belief that he had prepared an elegant article with neatness and dispatch.

Probably at the present time the vegetable extracts enter more largely into the formation of our prescriptions than any single pharmaceutical preparation. And it is equally probable that they of all others are less reliable and more subject to adulteration and are made with less care and scientific thoroughness. It is also very certain that a very large proportion of these are utterly worthless and inert, and in their application we are using remedies that exert no influence one way or the other on the progress of disease. How this great and serious difficulty is to be corrected is a question in which all are interested. I am impressed with the conviction that it is not very difficult to do this and it can only be accomplished by the members of our profession giving their patronage to druggists and manufacturers of known character and established reputation.

There are firms having celebrated establishments for the manufacture of drugs of long standing and whose unvarying reputation for honesty and capability have established universal confidence and whose character is dearer to them than gold. These names, which it would be invidious to mention, we can trust, for they never deceive us.

For some years the fluid extracts as ordinarily prepared I have found to give so little satisfaction I now almost invariably prescribe a decoction or infusion prepared alone from the vegetable remedy in its native state, and I rarely fail to obtain positive effects. I often obtain absolutely negative results from the fluid extracts of ergot, uva ursi, digitalis and other vegetable remedies and get as certainly positive effects from the decoctions of remedies prepared from the article in its native state.

It is said that Lawson Tait found the extract of ergot so very unreliable that he now prepares a decoction from the grain at the time when needed for immediate use.

In a practice extending over many years I have seen so much of the evil effects of what I have here termed *negative medication*, or in other words, the absolutely negative results in the use of medicine arising from the various causes mentioned, I have come to regard it as necessary in any case undergoing treatment when the progress is either stationary or retrograding to consider the simple question whether the action of our remedies is positive or negative, certain or uncertain. Or on the other hand, whether the defect lies in our diagnosis, the inappropriateness of our therapeutics, or in quality, or method of compounding our remedies. Hence, in all cases where serious difficulties arise and the progress of the case is unfavorable, I have come to consider the questions of the character of the compounding druggist; the quality of the medicine prescribed, its solubility or insolubility and the possibility of adulteration or substitution.

Dr. Didama, of New York, said: I think we will all agree with the essayist that many pills do not give us satisfaction. He did not refer to the tablets which we have in soluble form. Most of these are readily soluble. Sugar coated and gelatine coated morphine pills will rarely dissolve. The administration of medicine in capsules is used a great deal; and some of us in the east are in the habit of administering medicines in wafers which are swallowed very easily by

persons who cannot swallow a pill. We cannot control the druggist and we cannot always send our patients to the one of our choice, as patients have also their preferences. They take them often to the cheap pharmacist. The speaker favored the dispensing of drugs by the physician.

Dr. Wilson, of Kansas City, remarked that for twelve years he had been a druggist and during that time he had learned something. Since becoming a physician he had dispensed his own drugs, except for a short time. Since doing so he had largely increased his business. The pills of one of the large advertising firms in the United States will invariably pass through the entire alimentary canal without dissolving. The value of our work in the future, in dollars and cents, will lie in our dispensing our own remedies.

Dr. Herrick, of Cleveland, heartily agreed with the remarks that had been made. We are all witnesses, he said, of what Dr. Brown had said. He believed that the dispensing of our own drugs is in the way of progress. This is the custom in England and Europe. It can be done with little expense and trouble. It will greatly improve the quality and the taste of our medicines as well.

The next paper read was entitled

A CASE OF AMÆBIC DYSENTERY.

BY E. P. GERRY, M.D.,
OF JAMAICA PLAINS, MASS.

In calling attention to the amœba dysenteriae, the nomenclature of Councilman and Lafleur has been followed, instead of Lösch, who in 1873 first described the organism under the name of amœba coli. As Councilman and Lafleur say in their admirable work on amœbic dysentery, the name amœba coli is not distinctive, for it is very probable that there may be a number of species of amœbæ which, under certain conditions, infest the colon.

They quote Cunningham, of India, as having found them not only in human feces, in health and disease, but also in the feces of some of the domestic animals. It therefore seems proper that the more distinctive name is the one by which the organism should be known. Lambl in 1859 discovered certain organisms belonging among the protozoa in the intestinal contents. They produced a dysentery which baffled most observers as to its significance, even in countries where climatic conditions oftenest produced it.

Although ably studied and described by Kartulis in Egypt, as early as 1885, it did not attract that attention which such work deserves. Everywhere the mind of the investigator has been largely filled with such important subjects as bacteriology, etc.

In this country the name of tropical abscess, or dysentery, suggested at such a distance from that latitude, that the likelihood of its occurring among us of the temperate zone was hardly thought of, until Osler, in 1890, first found and described it, and made it evident that it might be brought to, or even originate in a northern country. Since then cases have been found of which the one to be related is a type, which occur unexpectedly, probably from the same but restricted causes which produced the condition in warmer climates.

That they have been unrecognized is undoubtedly true; that this disease occurred in the United States before it was recognized is also true, for Councilman and Lafleur, after a very careful study of the specimens of dysentery in the Army Medical Museum, found undoubted traces of amœbic dysentery. The specimens came mostly from soldiers who died of dysentery during the late war, remaining undescribed until Osler's discovery in 1890 led his colleagues to give special study to all quarters where the disease was liable to be found. In view of these facts, it is