Edson has secured a place with the the girl's life might be prolonged by three other great medical pioneers —Jenner, who discovered vaccina-Brandt protested, but took the girl untion; Wells, who discovered anaes- der treatment.

2

ered the germ origin of disease. began, and she was then the typical Through the unselfish and com- consumptive in appearance. I also saw plete gift of his discovery to hu- her on the day when Dr. Brandt admanity he will secure a place ministered the last dose of Dr. Edson's among the most high-minded and healthy a young woman as one broadest of scientists.

will publish the statements of Henry along the Hudson River-and was pre-A. Mott, Ph. D., LL. D.; Dr. paring to go out that evening. ed by Dr. Edson himself.

Ninety-one show marked improvement, but have not yet been under treatment long enough for the doc-tors to feel positive of coming re-

entirely One died under treatment.

thesia, and Pasteur, who discov- I saw her shortly after the treatment would wish to meet. She had walked The Medical Record to-morrow four miles-two being over the hills

John H. Ripley, Dr. R. P. Lin- Probably no disease has so frequent coln and Dr. E. N. Brandt, all of ly disappointed really great scientists New York City, and Dr. Lewis Balch, of Albany, N. Y. All of these physicians are of the very made before the remedy was tried. highest standing, and all of them In each case there was considerable have most carefully investigated logic in the theory, but in each case the merit of Dr. Edson's remedy, some mysteriously puzzling de-Two hundred and eighteen cases tails of tuberculosis stopped its efhave been formally reported upon previous failures of various remedies by physicians, besides those treat- to prove practically useless that Dr.Edson decided to keep all his experi-Twenty-three of these patients have been discharged cured. Sixty-eight are so far along toward complete recovery that the at-tending physicians announce a be-certain.

kowski, and other great chemists had Three have resisted the remedy years before declared that carbolic

It should be stated that these last uent of the blood of man, the horse four cases were so far advanced that and the cow. Dr. Edson argued that

acid or phenol was a normal constit-

24 Whitehall sh Tel 5 - 96 Editor of The Tournal Sir - In answer to your question as to the working formula used in the preparation of Asceptolin on Dr Edon's laboratory, I forward the following Water - distilled - 97.25 Carbolie Acid Mercks 2.75 Polocarpin - phenge-hydropide 0.01

# THE FORMULA DISCLOSED BY DR. EDSON'S CHEMIST. months. To-day I am not far from

all other treatment had been aban- as it is really a part of the blood there doned when Dr. Edson's method was must be some way of using it so that applied. At no time did the attending it would not be harmful in its effect physicians believe there was the on the health, and so that it would still slightest chance of recovery. The retain its recognized properties as a cent scientific discoveries in being of treatment by the new plan was, at the germ killer. This is really all that Dr. Edson has done. He has found a safe the preparation which cures diphthe-Of all of the diseases which afflict the way of introducing carbolic acid into ria, is drawn from animals. It is, as

down until at the end of thirty seconds the syringe was empty. When it was withdrawn a lump half as large as a The Discoverer's Story. hen's egg raised the patient's skin. " Did it hurt?" I asked. "The syringe pricks a little as it goes in," was the answer, " and the It Has Done. entrance of the fluid makes the place smart a trifle. But at the end of five By Cyrus Edson, M. D. minutes, when this lump will have en-

forced under the skin. With the sible to separate the toxine and anti-

thumb and forefinger of one hand he toxine of consumption as the toxine

gathered up a ridge of skin and flesh. and anti-toxine of diphtheria had been

tirely disappeared, the smart will have gone away, too. One does not mind such trifling things when one reaps such great advantages by enduring "How long have you been under

treatment?" "Three weeks ago I had given up hope of living for more than three

well, I think. My cough has almost entirely disappeared."

The Theory of Edson.

The Edson cure differs from all rets name indicates, an antidote to the

manufacture as complete and scientific as possible, I requested Professor Henry A. Mott, the distinguished chemist, to investi-The other hand drove the needle of the separated. It proved that the remedy syringe with a gently vicious little dig for consumption must be found outinto the patient's body, and two press- side of the human body. Edson found gate the process and report to me, Dr. Mott kindly consented, and his report is as ing fingers slowly forced the piston it in his laboratory. EDWARD MARSHALL. Chemist Mott's Report.

How the Qure Was Thought Out, What It is and the Work

These Are the Tubercle Bacilli Which Dr. Edson's Fluid Kills.

Magnified 4,500 diameters. Photographed from an illustration for Da Costa's Medical Diagnosis,

THIS is Dr. Edson's statement, which will appear in the Medical Record to-

morrow: During a study of phenol, made in the early part of 1805. I was very much struck by the observations of Stadler, Merck, Brieger, Salkowski and others. These investigators declared phenol could be found in the secretion of man, the horse and the cow, According to Merck, healthy secretion from a mixed diet contains 0.004 grams of phenol per litre, and, according to Salkowski, under pathological conditions the amount may rise as high as 1.5575 grams; in other words, during health phenol is a normal constituent of the secretion, and during disease the per cent present is enormously increase

It has long been my personal belief that many pathological phenomena observed in diseases which are not usually credited to germ infection, are but the manifestations of the absorption of poisonous bacterial products. For example, the high temperature of fever may arise from the poisoning of the nerve centres by such products. If this be true, then the increased secretion of phenol by the system during disease is, in fact, one Naturo's many devices to cure the underlying condition, to destroy the germ infection, increase of phenol elaborated by the system during pathological conditions is, in the light of the knowledge we have of bacteriology and of phenol, extremely significant, This reasoning naturally led me to think phenol was selected by Nature for the cure of some, at least, if not all, of the so-called germ disenses. Of course, the conclusion was obvious, but the corollary of that conclusio which assumed great importance in my mind. was this: If nature herself provides phenol during disense, then it cannot be possible she will not tolerate the administration of the agent in effective dosage. Yet this fact stared me in the face, that an injection of any known solu-tion of phenol in effective desage was be-Heved to enuse poisonous symptoms. This was equivalent to saying there must be some form in which phenol could be injected in effective dosage, which would aid nature in her efforts to effect a cure, and which would tolerated by the human system. Moreover, it was apparent to me that phenol, being the only known antiseptic agent, except its homologue, cresol, of which the amount in the system is increased during disease. It would be the best to select for experimental purposes to the exclusion of any When we follow Nature along her efforts to effect cure, we cannot go far wrong. The problem before me, then, was to find the form of solution of phenol which Nature would tolerate.

pectorant and stimulant of secretion of very considerable power. It causes a certain in-crease in the amount of water separated from the blood in the lung cells. This is shown by the fact that there is an increase of watery vapor carried off by the breath of a

person taking it. From what has been said, it will be apparent to all chemists that the fluid is a hydrophenol, containing a definite amount of the new pilocarpine compound. It is not very difficult to make, provided

one has the apparatus and is sufficiently careful. It needs extreme care. The experience of my laboratory assistant, as writ-

ten in a note to me, was as follows: "For two months I could not produce a satisfactory fluid more than once in three times; in fact, I think we threw away, during the first three months, about one-half or nearly all of what we made. The results of our experiments with guinen pigs were such as to convince any one that no phenol solution of the strength of the pilocarpine-phenyl-hydroxide solution, except the latter, could be safely injected. If other men make it they should be extremely careful, otherwise their product may give rise to serious consequences. At the same time there is no reason why a competent chemist should not make it successfully."

The solution prepared in my laboratory is a colorless fluid, strongly refracting light, having the characteristic odor and taste of phenol. Injected under the skin it causes a sharp, burning pain, not so severe as that following an injection of bichloride of mer-cury in solution. In the great majority of cases the injection is not followed by any local irritation whatever. In a few, a small nodule appears at the point of injection, which, as a rule, disappears after a few days. Dr. Glover C. Arnold, of New York, declares that this nodule results from injecting finids against the flow of the enpillary lymphatics, and advises all hypodermatic injections to be made with needle inserted in the direction of the flow of these lymphatic vessels. This, in the abdomen. which in my opinion affords the best site to give large injections, would be affected by directing the insertion of the needle away from the meridian line. Though I have given over one thousand injections, and some of them very large ones, viz., single injections of three hundred and fifty minims each, I have not seen a single abscess resulting therefrom, and nodulation in only two cases; one of these was on my own person, following an injection of two hundred and fifty minims for experimental purposes. No reaction, such as follows the administration of tuberculin, is observed after the injection of properly prepared pilocarpinephenyl-hydroxide solution, nor is there any

bacilli. The patient seemed in normal health; bad gained six pounds; appetite excellent: objected to further treatment on the ground that he was well. This improvement has been held until the present time, January 4, 1896, except that the pa-tient had a severe coryza and slight bronchittis in November, which necessitated treatment for one week, during which he was given one hundred minims of the fluid duily, and the spray as described in fore-ration. Buttant hear not action in the going. Patient has not yet regained his normal weight, however, weighing at date 148 pounds. His sputa has been repeatedly 145 pounds. His sputh has been repeatedly examined, but no bacilli have been found. Cose II.-L. B.-.. female, twenty-two years of age, marcied, good family history, has had two children, both being well and strong. Disease is of long standing, beginning some time in 1802. Apices of both lungs showed extensive atelectasts; branchits with screene extensive atelectasts; bronchitis with profuse expectoration, about three ounces of mucopuralent sputa daily; no cavities, but some shreds of fibrous lung tissue in sputa, which also contained large numbers of tubercle bacilli; loss of weight, strength and appetite; diarrhoea; night sweats; cough severe and almost con-stant, breathing hurried; shortness of breath preventing much autdoor exercise, vary little exertion inducing palpitation; patient very annemic. An ulcer, probably tuberculous was disclosed by laryngoscopic examination in arytenoid space. Putient spent the Summer at Liberty, N. Y., and had greatly improved, but lost this improvement, and something more, on return. A treatment up to October 17 had cona treatment up to occover 11 and con-sisted solely of creosote, cod liver oil and quiulne. On October 17, one bundred minims of the fluid and the spray of lodoform and ether were administered, and these were continued daily thereafter until October 20. No change, except that patient said her appetite had much im-proved; she also said something was makinb her nervous. One hundred and ten minims of the fluid and spray were daily administered, until November 1. Within this period a very great change for the better had taken place; patient coughed less, slept well, had good appetite, had guined three pounds in weight, expectoration was much less, and there were no night sweats. press, and there were no night sweats. Tubercle bacilil were still present in the sputa, but in less numbers, and no lung tissue appeared under the microscope. The movements from the bowels had been normal since October 22.

he obtained, and this contained no tubercle

This patient's daily condition continued to improve until November 28, under the daily treatment I have described. Just prior to this date her sputa was examined, and no tubercle bacilli found. She had gained ten pounds in weight, and the amount of sputa decreased until only about half an ounce daily was expectorated; her

## Consumption's Cruel Record.

This diagram tells at a glance the frightful story of consumption's importance among diseases. Since the influenza made its appearance in 1891, pneumonia has caused more deaths than have tubercular diseases; up to that time consumption led the dreaded list, and it should be explained that in 20 or 21 per cent of cases, pneumonia. causes death only because the sufferers are already predisposed toward consumption, and are thus particularly susceptible to the other disease.



cough grew less and less. On the latter date (November 28) the patient com-plained of nausea and loss of appetite. These conditions persisted for a week without return of other symptoms, except that the patient lost about three pounds in weight. Feeling that the treatment was causing the unfavorable symptoms, I discor-tinued it for one week, during which they ceased. During the discentinuance of the

oesophageal tube within three hours of injec-

visible physiological action noted following

an injection of two hundred and fifty minimis, given to a man weighing one hun-

dred and fifty pounds, except that traces of phenol were noted in the con-

densed vapor of the breath, and in the con-

tents of the stomach drawn off through the

A Specific for Malaria.

tion.

mman race tuberculosis is the most the human body.

How the Cure Operates. fatal. Its ravages are by no means confined to the lungs alone. It attacks, In other words, he has devised a way In fact almost every part of the body. of flushing the human system with a One of the first cases which Dr. Ed- disinfectant just as the sewers of New son treated and cured was that of a York City might be flushed with water boy who was suffering from tubercular containing carbolic acid. Into every disease of the hip joint. When he artery and every vein Dr. Edson sends went to see Dr. Edson, early in last his preparation, which he calls autumu, his case had been given up aseptolin, and wherever it finds a by the hospital physicians of New germ it kills it.

York, Unfortunately, no formal record Another illustration of its simplicwas kept of his progress, but the pres- ity is this: In the offices of the Board ent writer watched it with Dr. Edson. of Health are several little saucers When the boy first appeared he had containing bouillon. In these saucers been without sleep for weeks. He countless germs of the most terribly said that he had not been free from contagious diseases have been cultipain for more than ten minutes at a vated until each saucer contains miltime during at least two years, and llons of them. Any one of these germs his left leg was contorted at the hip would kill a man. If, however, one of in a manner which made it absolutely the chemists of the Board of Health necessary for him to use a crutch in staff should pour over one of the sauwalking. He called daily at Dr. Ed- cers a solution of one part of carbolic son's office, where he was under treat- acld to three thousand parts of water ment for perhaps' five minutes at a every germ within reach would be time. In less than a week he slept killed within twenty-four hours. Dr. comfortably. Within two weeks he Edson has done precisely the same said the pain had practically left him. thing with the whole body which one Four weeks after that he went to his of the chemists might do with a germ home in Kansas City, cured. He no culture saucer. He has found a way longer walked with a crutch. What of flooding the entire human system there was left of his limp was purely with a solution containing carbolic habit. His cheeks had filled out into acid and a new salt, discovered healthful plumpness. He said that he during his experiments, and called felt like running and jumping. From pilocarpin-phenyi-hydroxide. This soan invalid he had been changed into lution is introduced directly into an ordinary healthy boy. This is a the blood, which then becomes typical instance of the effect which the a liquid, containing one part of car-Edson cure has had on some of the bolic acid to from 1,200 to 1,500 parts forms of tuberculosis other than con- of blood. Thus, with every heart beat a disinfectant more than twice as sumption.

#### A Girl's Recovery.

strong as that which was necessary The story of a consumption patient to kill the germs in the culture saucers is not less amazing. The writer was, is pumpled through every part of the during November and December, in- body, and makes clean every germ indebted to Dr. E. N. Brandt, who has a fected spot.

large practice at Hastings-on-the-Hud- The Journal's representative watch- sulted in "Koch's Lymph." The reson, for an opportunity for watching ed the treatment of one patient, whom sult of his labors, however, has proved this case. The patient was Nellie Dr. Edson describes in his report as that while the theory is successful Brannock, of Dobbs Ferry. In May, "A. E." with diphtheria, it cannot be practical-

1895, she developed symptoms of con- He sat calmly in a chair with bared ly, applied in consumption. Koch's sumption. The disease spread with abdomen while Dr. Edson prepared Lymph, which promised such great rapidity. In early October of last year to give him his dose. On the table was things, has turned out to be a valuable her condition was considered hopeless a small bottle of the fluid, clean and aid in treatment of human sufferers, as by her family physician and other doc- sparkling as the purest crystal-abso- well as a means by which veterinary tors to whom her parents took her. Intely without tint. From this Dr. surgeons can absolutely diagnose Her family physician at last an- Edson filled a syringe holding half an tuberculosis in cattle. Nothing more. nounced that further treatment was ounce. Then he adjusted the delicate This proved that a new method must useless. He told Mr. Brannock that needle through which the fluid is be sought. It proved that it was impos-

poison (toxine) of diphtheria. This is its theory:

The germs, when an animal is attacked by a germ disease, will in time produce some counteracting substance which will kill themselves. If this were not so, the least illness would mean certain death. The ultimate death or recovery of the sufferer depends entirely upon the comparative strength of the two opposing forces. If the toxine is stronger than the anti-toxine death will result. If the anti-toxine is stronger than the toxine the patient will recover.

The diphtheria serum, the anti-toxine, is created by inocculating animals with the disease of diphtheria in a mild form. From their veins is then drawn nature's own remedy. This anti-toxine is then injected into the veins of the human sufferer, where it reinforces the anti-toxine which has already been generated there. Thus the disease is conquered in a perfectly natural way. Nature is merely strengthened by the transference of the resisting power from one sufferer to another, where it is added to the resisting power which is already there.

It is along these lines which Koch worked in the experiment which re-

## The Line of Experiment.

With this idea in mind, and remembering the fact that creasote has been, and is, excolous disease, more especially for pulmonary toberculosis, and, furthermore, knowing that creasote, according to the latest chemical researches, is not phenol, as it was formerly supposed, but merely has the latter as one of its constituents, I formed the opinion that the so-called creosote treatment, which may almost be said to have become a fad among physicians, depended for its success mainly on the presence of the phenol.

I determined, therefore, to experiment with a view of producing a fluid which could be administered hypodermatically, without irritation or toxic effects, and which should at least contain phenol in such effective dosage as would turn the scale of natural resistance in favor of cure. I am well aware that many men have drawn conclusions from experimental research that at least one per cent of phenol to the entire amount of blood in the system is necessary to effect the result I aimed at, and that such an amount would be overwhelmingly toxic. But these scientists too often lose sight of the fact that experiments outside of the body are not, and never can be, identical with results depending in part on factors operating within the body. The blood is an antiseptic fluid when within the body, and one of very considerable power. Its natural resistance to germ infection, though this ubtless varies in different individuals, is great. A comparatively small amount of antiseptic reinforcement, therefore, may be sufficient to increase that resistance to the estred point.

I will not enter into a description of the long line of experimental work in the

ich has a much melting point and a much lower boiling point than the phonol ordinarily obtainable, I find that you subject a solution of such phenol, distilled in water, to an additional distillation, heating the vapor as it passes from the retort to the receiver in an oilincketed tube (in which a thermometer can be inserted), and then condensing the same in a double-stoppered receiver, which en-ables you to reject the first 10 per cent so condensed, utilizing the remainder, with the exception of the last 10 per cent, which is likewise rejected.

laboratory which finally led to the produc-tion of the fluid I have used in my formu-lated treatment of phthisis. Desiring to have the description of its

"I have examined the preparation known as 'aseptolin,' as also the process em-ployed in its manufacture, and I have the

"By means of chemical analysis, there can

"By incass of chemical analysis, there can be separated 'from the fluid in question a coloriess crystalline salt, which is new to the medical profession, being a chemical combination of absolutely pure phenol and the alkaloid plicoarplue. This plicoarpine-phenyl-hydroxide exists in the fluid, dis-solved in an aqueous 2.75 per cent solution of phenol.

Water ..... 97,2411

Phenol ..... 2.7401 Pilocarpine-phenyl-bydroxide ..... 0.0188

hydroxide, deducted by calculation, is as

Total ..... 100

but the very purest chemicals can be em-ployed. The phenol obtainable in the mar-

ket, besides containing traces of para-cresol,

contains, as a rule, other, impurities which

unfit it for the direct preparation of this

Starting with phenol distilled directly

"Your experiments have shown that none

Per Cent

Per Cent.

of phenol. "The composition of the fluid:

follows:

honor to report as follows:

'In the preparation of pilocarpine-phenylhydroxide, it is necessary only to weigh out an equivalent proportion of this purified phenol solution (after determining its strongth by chemical analysis), heat the same to about 100 deg. C. (212 deg. F.). and then gradually add to it an equivalent amount of the pure alkaloid pilocarpine, when, on standing for ten or twelve hours, the uncrystallized pilocarpine-phenyl-bydroxide will separate out. From this salt the fluid may be directly prepared, by following the analysis given above. The usual method, however, adopted in its preparation on an extensive scale is as follows: "The highly purified phenol is dilated

with distilled water until the percentage of phenol is reduced to exactly 2.75 per cent. which can be determined by the phenolo-meter. This is introduced into glassstoppered receivers, which have been thor-oughly cleaused with boiling water. In the receiver the right proportion of the alka-loid pilocarpine is put, so that, as the phenol distills over and condenses, it immediately combines with the pilocarpine in the production of the fluid. The temperature of the receiver is kept reduced by means of a small stream of water, yet sufficiently high to insure the desired union, but it is never allowed to approach a tem-perature which would permit of the alkaloid suffering from any other chemical

"Experiment has demonstrated that strict adherence to the above methods is required in order to produce aseptolin of a uniform composition and of an absolutely colorless physical appearance. A cloudy, milky or slightly tinted preparation should be relected. The proportions of the constituents do not permit of the presence of even traces of foreign bodies, if reliable results are to be expect

### Aseptolia and Its Making.

It will be noticed that Dr. Mott speaks of "aseptotin." Thinking this was a good word, and following the convenient fashion of substituting a name for a formula in writing. I have called this chemically pure solution of phenol and pilocarpine-phenylhydroxide, aseptolin, because it is more convenient than is the repetition of the formula; but it is unnecessary for me to say that in order that such a name muy not be classed with that of a proprietary remedy, the pro-fession is free to substitute a better term if need be, and either in its present form or in any other the new agent can be used as freely as any compound or combination of the Pharmacopoeia.

Pilocarpine was added to the solution for two reasons: I. To induce leucocytosis; 2. To stimulate glandular activity. It also accomplishes a third purpose, for it is an ex-

My experience with pilocarpine-phenylhydroxide in the treatment of malaria leads me to consider it a specific, and of even greater efficiency than quinine

I have personally treated thirty-eight cases of this disease. In not a single case hus there been any recurrence of the malarial paroxysm after the first injection of two hundred minims, nor have any of my cases had a recrudescence or a recurrence of the attack. The patients appear well in every way within a few hours of the first injection. The medicine appears to act equally well when given during the paroxysm, during the intermission or remission, and in remittent types as well as intermittent.

### Instances of Cures.

In reporting results obtained from the application of the treatment described in the foregoing, I flud myself confronted by many serious difficulties, not the least of which are lack of time and space. My practice has demanded an amount of attention that has put serious obstacles in the way of my work. I have, however, been very greatly assisted in testing the fluid by able practition-ers, to whom I owe a debt of gratitude. Among these are Dr. E. P. Lincoln, Dr. John Among these are Dr. E. P. Libcoll, Dr. John G. Perry, Dr. E. N. Brandt, Dr. John H. Ripley, of New York City, and Dr. Lewis Balch, of Albany, N. Y. The experi-ence of these gentlemen will probably be given in articles of their own. I have prepared and written reports of a large prepared and written reports of a large number of cases treated, but in an article of this kind find space for only a very few typical ones, more to illustrate the method of treatment than its efficiency:

Case L-W. M-, male, aged twenty-four; good family history. Has suffered from cough; normal weight, about 158 pounds; September 3, 1895, 128 pounds; had occasional night sweats and attacks of facial and intercostal neuralgia. Expec-torated about an ounce and a half of muco-Expect purulent sputa dally, containing large num-bers of tubercle bacilli, also streptococci; a slight daily rise of temperature, 90.4 de-grees, F. to 100.3 F, being the evening temperature. Physical signs showed a small cavity surrounded by an area of consolidation, in middle lobe of right lung. This general condition was first noted in Decem-ber, 1894, but improved so as to have entirely disappeared during a six months' residence in New Mexico. Upon return to New York, there was recrudescence. Prior to September 5 he received extract of malt with cod liver oil, creosote carbonate, and a cough mixture containing codeine and am-Under this the patient rapidly

lost ground. September 3 .- Sixty minims of the finid were injected into the abdominal parietes, and iodoform spray administered. Nutrient treatment, consisting of emulsion of cod liver oil, somotose in chocolate, egg phosphate, etc., was prescribed. The dose of the fluid was increased ten minima duily,

until one hundred minims daily were given. September 10,-Cough much better, expec toration diminished one-half, and containing fewer bucilli; temperature normal; no return of night sweats; physical algas seemed

slightly improved. October 1.-Had had one hundred minims daily since September 10, and the spray had also been daily administered. No cough sputa, consisting purely of mucus, could

treatment she developed an attack of acute ouchitis, and while she was still suffering from it I resumed the treatment, giving 120 minims the first day and the spray. The following day I gave 100 minims and spray, and continued that treatment dally for one week, then every other day until the present time (January 4, 1806). She recovered quickly from the bronchitis, re-gained her weight and about six pounds ad-ditional. Microscopic examination shows a recrudescence of the tubercular infection. She still has a slight cough; the laryngeal conditions disappeared during The fourth week of treatment. She ex-pectorates at present but very little, and the sputum still contains a few tubercle bacilli. There are no night sweats. Pa-tient is strong and able to take an abunbacilli. dance of outdoor exercise.

This case is a very good example of a number in my own practice, and in that of other observers, where the treatment has accomplished a great deal, and where it promises still more. At the same time it is a constant struggle in these cases to keep the upper

Fifty Doctors at Work.

It is necessary to say a few words in reference to the permanence of any cure or apparent cure in a case of tuberculous disease In the first place, patients once having had such a disense must be considered susceptible to its infection and liable to a reinfection and a new attack. Their susceptibility, how-over, is likely to diminish. Each year, as they grow older, will doubtless effect changes that will render their systems less favorable soils for the growth and development of the buckli. Second areas of infected structures may become encysted and remain so for long periods, during which are apparent cure will seem to have taken place, the condition being one which, in fact, will delude the patient only while the encystment endures. Should something occur to break the latter down and free the backlift, a reoradescence of the dis-ease will at once follow. These two cond-tions, it seems to me, must always obtain, and must be considered not only in the case of the treatment I have just described, but as affecting the permanence of results that may be obtained through the means of any treatment that does not havdeve the use of any treatment that once have negative the set of the dis-struction of the set of the set of the dis-structions of the set of the distructions of the treatment of have permanents of results that may be obtained through the means of any treatment that does not havdeve the use of any treatment that once have negative of the dis-In the first place, patients once having had

treatment that does not involve the use of a preventive virus. Time and space have permitted only the description of the treatment with sufficient detail to enable any physician to apply it. Reyond this-und a few references to the theory 1 believe underlies it--I have not gone. We pride ourseives, and justly, on this side of the Atlantic, on our practi-cality. As physicians, we asks for results only, and no theory has a living chance smong us, if results do not follow its application.

Reyond this-make as possible to approve the Reyond this-make as possible to the prove the possible of the Atlantic, on our practi-cality, and no theory has a living chance among us, if a results do not follow its application. It is for this reason that I submit this treatment to the protession. From what I have personally seen in my own practice, and from what has been told or written to me by scientific men for whom I have re-spect, I condition the best result ye obtained, not only in the cure of phthis and other forms of thebeculosis, but of other discusses of germ origin. The possible curative range of the full is obviously very while.

curvative range of the fluid is obviously very wide. It is now in the hands of about fifty physicians, in different parts of the country. I will beave for a subsequent report the descriptive histories of a number of cases in-cluded in the following summary: The total number of cases that have been and are being treated with this fluid which have been reported to me to date is 218. Of these, improvement is reported in 212 cases, and no improvement in 4 cases. Of the improved cases 24 have been disclarated curvat, 68 will, in the optaken of the at-tending physician, be discharged curved; and in fill cases, while improvement is botted, no definite prognosis can be made yet. In 22 cases are improved to a more an outy tempor-ary. Of those is which an improvement has ary. Of those in which no improvement has been noted. 1 has died.