Dr. Piffard regards it as a dangerous remedy, and Professor Rapon, while he reports good results with it¹ in scabies, prurigo, and eczema, advises in prolonged cases simple ointment to be substituted every fourth week to avoid any possible risk of absorption.

Dr. Neisser stated that one gramme of a saturated solution (which in water would contain about one thirtieth grain of naphthol) injected hypodermically in a dog produced hæmoglobinuria, and shortly afterwards death.

To verify these accounts and satisfy myself on the toxic effect of pure naphthol, if any it possessed, I administered to one rabbit, repeatedly in twenty-four hours, thirty-four minims of a saturated aqueous solution, hypodermically, without any result, either to inconvenience the animal, increase his temperature, diminish his appetite, or cause lethal effect. This method of treatment was pursued for five days, not less than four to five injections being made per day, and the result was still the same. Determined to obtain toxic effects with it, and, if possible, to demonstrate its toxic action by a post-mortem examination, another rabbit was fed, at first every three hours, with one-grain pills of naphthol, and subsequently with two and four grain pills, at the same intervals, but, beyond increasing the appetite of the animal, no special effects were apparent. In consideration of this, one of my assistants, Dr. Charles S. Means, and my student, Mr. F. C. Waterman, volunteered to take naphthol themselves internally, to test, if possible, its action upon the human organism. They commenced with one quarter of a grain dose every two hours, their pulse, temperature, and urine being subjected to the closest inspection both before and after. The second day they took a half grain every two hours; the third, one grain every three hours; the same on the fourth, while on the fifth and sixth they took two grains every three hours, and on the seventh five grains twice daily. The pulse and temperature did not appear to be affected by this, nor was at any time albumen or blood apparent in the urine. Though they experienced great warmth in the epigastric region after each dose, that passed away in a short time, but left them with slight vertigo, buzzing of the ears, with all evidence of cerebral hyperæmia. The alvine evacuations were softened and of mushy consistence, changed to a clay color, and in one of the cases increased to diarrhœa.

Arriving at a résumé of my experiments, I must certainly proclaim the odorless naphthol which I had received from Dr. Wolff as not a toxic agent; and while I have found it a most useful remedial substance, and a disinfectant and antiseptic of the greatest value, it does not, in my experience, confirm the dangerous influence exercised on the human organism as reported by the gentlemen above quoted; a fact for which I can only account by the greater purity of the material used by me, — purified from the deleterious contaminations above enumerated by the process already described, which is not employed abroad, where yet naphthol is sold and used as reddish crystalline masses, with strong, pungent, and disagreeable odor. That it is far superior to carbolic acid and other disinfectants and antiseptics I have no doubt, and I am informed that in price it is not alone cheaper than the former, but, by its greater efficacy and smaller amount necessary, it is certainly more advantageous, aside from its greatest recommendation of being almost absolutely odorless. It must be

¹ British Medical Journal, page 750.

borne in mind that all my remarks apply to odorless naphthol, — only such as I have exhibited, — and that I consider that alone as safe for medicinal use.

RECENT PROGRESS IN PUBLIC HYGIENE AND STATE MEDICINE.

BY SAMUEL W. ABBOTT, M. D.,

Health Officer Massachusetts Board of Health, Lunary, and Charity.

SEWERAGE AND SEWAGE DISPOSAL.

Sewage Utilization at Pullman, Ill. — The practical results of sewage farming at the town of Pullman, Ill., have been thus far unusually successful, and demonstrate the fact that under favorable conditions the work can be conducted in such a manner as to yield a fair profit on the investment. The town of Pullman has a population of 8000 or more. During the past season the sewage farm has been devoted to an experimental crop of a varied character. A general estimate is given as follows: —

Acres cultivated, 160.

Total investment, \$80,000.

Estimated cost of operating, \$8000.

Estimated value of crops, \$12,500.

Estimated profit beside taking care of the sewage of 8000 people, \$4500.

With longer experience and better appliances the superintendent believes he can considerably increase this profit in coming years.²

Sewerage of London. — Complaints having recently been made that the sewage of London, which is discharged into the Thames below the city, at Crossness and Barking Creek, has become a nuisance to the inhabitants dwelling near the outfalls, the Secretary of State has, in compliance with statutes, recommended the appointment of a royal commission to investigate the cause of complaint. A commission has, therefore, been appointed and instructed "to inquire into and report upon the system under which sewage is discharged into the Thames by the Metropolitan Board of Works, whether any evil effects result therefrom, and, in that case, what measures can be applied for remedying or preventing the same."

Sanitary measures have accomplished much toward reducing the mortality rate of the great metropolis in the past half century, and the report of this commission as a continuance of the same important service will be looked for with much interest.³

The Sanitary Works of Paris. — M. Durand Claye, the secretary of the recent Commission appointed to report upon the sanitation of Paris, has published a summary of the proceedings of the Commission.

Certain points of interest in this report show a decided inclination on the part of the majority of the Commission to adopt a general sewerage plan in place of the storage of filth which has long been tolerated throughout the city. (The traditional sewers of Paris are not sewers in the sense of conduits for the conveyance of household sewage.)

At its session of June 21st the Commission adopted several resolutions relating to the regulation of —

(1.) Water-closets, with their accompanying supplies of water, and the soil-pipes connected with them. Also the necessity of traps between each house and the sewer.

² Sanitary News, October 1, 1883.

³ Report of Metropolitan Board of Works, May, 1883.

(2.) Privy vaults, and the necessity of their discontinuance wherever connection could be made with the sewers.

(3.) The immediate abolition of *movable vaults* or tanks wherever it is possible, except where dry absorbents are carefully used.

(4.) Apparatus for separation and dilution. Contrivances of this sort, displaying but little ingenuity, have been in use for many years, subjecting basements and cellars to constant liability to foul stench from overflow and neglect. Their use is properly condemned, and the substitution of a water supply and sewer connection advised.

The management and care of the sewers occupies a portion of the report. Flush-tanks are advised adapted to sewers having a total length of 424 kilometres (262 miles), each flush-tank to hold ten cubic metres of water (2640 gallons).

The purification of the sewage is also mentioned as a matter of importance, and its treatment by soil irrigation upon land along the banks of the Seine advised as a process devoid of danger to the public health. The execution of the plan advised by the Commission will occupy several years. Thus far the Municipal Council have refused to appropriate the sum requested for these public works by M. Alphand, the president of the Commission.¹

The Sewerage of Chicago. — The proper disposal of the sewage of a large and level city like Chicago is not an easy problem. A peculiar feature in its present system is the Fullerton Avenue conduit, a large brick sewer in which the contents are compelled to flow in either direction, east or west, as occasion may require. This result is accomplished by means of a screw like a steamer's propeller working in the sewer with a capacity of 24,000 cubic feet per minute at 100 revolutions. At one end the outlet is into the river (North Branch), and at the other into the lake. The city water supply is drawn from the lake at a point in doubtful proximity to the sewer outlet. During the greater part of 1881 the sewage was forced into the lake, and as a consequence "the effect upon the water supply was painfully apparent during the greater part of the year notwithstanding the claims of the authorities that the sewage thus forced into the lake through the conduit obligingly flowed off in a northwesterly direction or south along the shore. The water given the city to drink was plainly contaminated by sewage. The underground communication between lake and river still continues its misdirected mission of conveying sewage from the latter to the former, and the lake shore is washed with the black and decomposing waste of thousands of distilleries, factories, stables, and houses. Where this conduit operates, as was originally intended, from lake to river it serves a useful purpose."²

Bunzlau. — As a contribution to the history of sewerage and sewage disposal, the recent Hygienic Exposition at Berlin has brought to light the fact that Bunzlau, a small town in Silesia, of 8000 inhabitants, has had for more than three centuries (since 1559) a complete system of water supply, sewerage, and sewage utilization by surface irrigation. In an ancient chronicle of 1538 the advantages accruing to the town from its water supply are detailed as follows:—

- (1.) To quench the thirst of man and beast.
- (2.) To bleach linen.

¹ Revue d'Hygiene, September, 1883.

² Sanitary News, October 1, 1883.

- (3.) To preserve live fish in tanks.
- (4.) To run mills.
- (5.) To cook and brew beer.
- (6.) To wash and bathe.
- (7.) To carry away the impurities of the soil.
- (8.) To irrigate gardens and fields.

The larger sewers are chiefly rectangular, and built of slabs, and are of ample dimensions.

The first attempt at sewage irrigation by this town was made in 1559, and was quite successful in its operation. At a later period each farmer was given the use of the sewage for certain hours, varying from two to four hours per week. The sewage is distributed in open trenches.³

Filtration. — A recent improvement in the filtration of sewage or of any liquids containing solid matter, is the Farquhar filter, an apparatus which claims the following advantages:—

- (1.) Economy of labor.
- (2.) Large volumes of liquid can be filtered continuously, and in a short space of time.
- (3.) Economy of material.
- (4.) Absolute limpidity of liquids filtered.

The deposit of a layer of solid material upon the upper surface of filter-beds has thus far proved a serious difficulty, much time and labor being required to remove the deposit and prevent clogging. The Farquhar filter overcomes this obstacle. Its construction briefly stated is as follows: A closed iron tank or cylinder containing a quantity of sawdust, charcoal, or other porous material. A revolving iron plate carrying a knife or scraper continually removes the deposit from the upper surface of the filtering material, and leaves it in the upper part of the cylinder, from which it may be removed as often as necessary. The liquid to be filtered is admitted from above under pressure, and the clear liquid flows out below. The capacity of the Farquhar filter has recently been tested experimentally, at the Mystic Valley sewer, through which flows an offensive, turbid, chocolate-colored sewage; its solid residue comprising the waste products of the tanneries of Woburn and Winchester. Its final success in treating this sewage remains to be proven. It has been treated during the past season in a series of shallow settling-basins, which removed a portion only of the solids.

FOOD AND DRUGS.

Vanillism. — Under this title Drs. Layet and Arnouzan have communicated to the French Association for the Advancement of Science the results of certain researches relating to the physical qualities, the effects, and the parasites of vanilla. Several cases of poisoning by the eating of vanilla ices and ice-creams are cited. At first the analyst had decided that the poisoning was due to the formation of lactate of tin in the vessels which were used in the process of preparation. But the confectioner having been obliged to abandon his business in consequence of the disturbance which followed the poisoning, his stock of vanilla was sold to a confectioner in another city, and cases of poisoning again followed its use. Other cases were also observed in Berlin.

The symptoms were much like those of cholera, — continued vomiting, frequent diarrhoea, epigastric pain, cramps in the legs, extremities and face cold and purple. Recovery in three or four hours after the onset

³ Sanitary Engineer October 4, 1883.

of symptoms, which usually take place in less than two hours after eating the *glace*. The same result has been noticed after eating other preparations in which vanilla had been used.

Other disturbances due to the handling of vanilla are also reported as occurring among operatives who cut the vanilla pods in small pieces. These disturbances consist in papular eruptions of the face and hands, with heat and swelling of the parts affected, pruritus, and irritation of the eyelids and the eyes, the eruption often attended with patches of redness and desquamation.

Bordeaux produces at present a crop of about 23,000 kilos. (50,000 pounds) of vanilla per year.

Infernal Machines in Beef.—In labeling pieces of meat for customers, butchers and others have found a very convenient article, which may be termed a barbed wire staple. The paper label is laid upon the meat and the pointed staple driven through it into the meat. Occasionally the paper becomes detached, leaving the staple in the beef. As a consequence two cases of œsophagotomy were recently reported from Philadelphia hospitals. A patient in a Massachusetts institution also found one of these hooks in her mouth while eating meat.

At a recent meeting of the Philadelphia County Medical Society the danger apprehended from these "skewers" was referred to as being overestimated. Possibly a few more cases of œsophagotomy may be necessary to illustrate their relation to hospital practice.

For convenience in identifying this barbarous implement the accompanying cut shows its shape and dimensions. Width 12 mm. Length 18 mm.

It is made of stiff iron wire; each point is quite sharp, and barbed like a fish-hook. They have been found in canned beef as well as in fresh meat.

Milk Inspection in Zurich.—In reply to inquiries as to the milk inspection in Zurich, Alderman F. Schlatter states that the work is intrusted to the care of a health commissioner and health inspectors or police. Analyses are made by two chemists, one for the city and another for the canton, acting independently of each other.

Inspections are made at early morning, without regularity as to time and place.

The instruments used by inspectors are a thermometer, a lactometer (Muller-Quevenne's), and a stand-glass. Milkmen are required to register and receive a license. They are to be treated uniformly, but not in regular order, a dozen or more tests to be made for each one.

Inspections are not made in a crowded street, but samples are taken to a neighboring police station, shop, or bakery, and a small fee paid to the proprietor for its use.

Punishments are provided for adulteration and for repetition of the act. Appeals to higher courts are also allowed.

In a population of 76,000 (26,000 in the city and the remainder in its suburbs) 12,500 litres of milk were daily sold in 1882. Two thousand one hundred samples were inspected as to their appearance, taste, and specific gravity, of which number 226 were analyzed by the chemists. Thirty-seven were punished.

In summing up the writer evidently believes that more efficient work might be done with more hearty coöperation on the part of the higher authorities, and suggests the publication of names as an additional measure.

The local regulations recognize two grades of milk, whole milk and skimmed milk (*halbabgerahmte Milch*), the latter being defined in the statute as a mixture of equal parts of skimmed evening milk and whole morning milk.

The whole milk must show a specific gravity before skimming of from 1029 to 1035, and after skimming not less than 1033. The chemical analysis must give at least twelve per cent. of solids, including three per cent. of fat.

The *mixed milk*¹ must show a specific gravity before skimming of 1030 to 1036, and after skimming not less than 1033. Its analysis must give at least eleven per cent. of total solids, and 2.3 per cent. of fat. The two sorts of milk must have distinguishing labels upon the milk-cans.

INFECTIOUS DISEASES.

Typhoid Fever of Fæcal Origin.—M. de Henry communicates to the Society of Public Hygiene of Bordeaux two series of cases of typhoid fever in which contaminated drinking-water was the medium of communication. In the village of Chez-Ganivet twenty-two people were attacked, and in this group the soiled linen of some patients ill with typhoid fever had been washed in a spring which was used for drinking purposes. In the second series an epidemic occurred in a prison at Ha, the convicts only in a certain quarter being attacked, thirty-nine in all. The prisoners awaiting trial, and also the women, in other parts of the prison all escaped infection. On inquiry it appeared that the water supply for the exclusive use of the convicts was pumped from a cistern in the court-yard. The convicts, after emptying their stool-buckets, came to this cistern and rinsed them, throwing the water on the ground, whence it doubtless made its way into the cistern. The other inmates of the prison obtained their water supply elsewhere.²

The Typhoid Epidemic of Paris.—Professor Pagliani, of Turin, in commenting upon the prevalence of typhoid fever in Paris, rejects the theory advanced by Virchow that rain-water, impregnating the soil, favors decomposition and the development of typhoid germs, and states his own proposition as follows: "Whenever heavy showers of rain fall, especially in torrents, as often happens in Paris, the volume of water in the great sewers increases in an extraordinary manner, and causes stagnation or rather regurgitation in the smaller conduits which connect inhabited dwellings with the principal sewers."

The rush of great volumes of water into the sewers stirs up the mud and filth which are deposited in seasons of dry weather, and the effluvia set free finds vent at the points of least pressure, the soil-pipes, water conductors, etc.

The writer shows that typhoid fever has prevailed most in those parts of the city where the foregoing conditions are found. He also adds the following proposition: "The number of cases observed is not in proportion to the quantity of water which falls upon

¹ Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege. 15 B. 3 H. 1883.

² Gazette Hebdomadaire des Sciences Med. de Bordeaux, 1883, page 188.

the ground, but to the quantity and probably to the quality of the gases (miasmes) set free and forced back toward the neighboring dwellings."

Epidemics arising from similar causes are quoted, that of Cologne, reported by Eulenberg as due to the obliteration of a sewer by the freezing of the Rhine; others, in Brussels and in Naples, due to choking of sewers in time of violent storms.

The conclusions of Professor Pagliani are in favor of an adoption of movable receptacles, and the complete removal of their contents for the benefit of agriculture, or the adoption of the pneumatic system of Liernur.¹

Vaccine and Variola.—A series of papers by Dr. Leonhard Voigt upon the relations of variola to vaccinia are given as the result of many years' experience and observation, and the following essential points enumerated.

As the practice of animal vaccination has been conducted quite extensively in the United States during the past ten years or more, and the opinions of animal vaccinators have been freely expressed upon the same subject, a different conclusion has been drawn, especially as to the eighth and ninth propositions of the writer.

(1.) Vaccine lymph may be procured by vaccination of the cow with lymph taken from the pustules of persons sick with small-pox. But no one can be sure that every attempt will be successful.

(2.) The vaccine obtained in such a manner is suitable for the vaccination of men on account of the energy of its operation, but it should only be used after transmission from animal to animal several times, by which proceeding its effect is mitigated.

(3.) In the first year of its use vaccine lymph obtained in this way possesses a higher efficiency than an animal stock several years old.

(By this term, a stock several years old, we should understand lymph transmitted from animal to animal, at the time of the maturity of the vesicle, for several years. In accordance with the custom of animal vaccinators each year would represent a series of fifty-two to sixty-five animals, the period of maturity presenting slight variations.)

(4.) Vaccinia and variola originate in the same virus, and each gives to the person attacked a certain claim of immunity against suffering arising from the same source.

(5.) The duration of this immunity is in proportion to the intensity of the attack.

(6.) Among people who have had the small-pox twelve years before, we find almost the same susceptibility to vaccination as among those who were vaccinated at the same time. Consequently children twelve years of age, and vaccinated during the first year, are liable again to take small-pox.

(7.) Therefore, the imperial vaccination law which orders the vaccination of infants and their re-vaccination at twelve years of age fulfills an actual necessity.

(8.) Animal lymph transmitted from calf to calf, and originally very active, loses its power earlier than humanized vaccine transmitted from arm to arm. Humanized lymph gives the best results in men and animals in the long run; therefore the animal vaccine of old stock promises inferior results to retro-vaccination of the first remove.

¹ Giornale della R. Societa Italiana d'Igiene, 1883, page 288.

(9.) Lymph carefully propagated, and originated from the cow-pox but a short time before, is the most efficient, not only in its animal but especially in its humanized form. Therefore resort should frequently be made to the original cow-pox in order to obtain lymph as protective as possible.²

Antiseptics.—In some researches on the aseptic power of certain substances with reference to bacteria M. Miguel publishes a table in which is given the weight of each substance required to render imputrescible a litre of beef soup (bouillon de bœuf).

We give a portion of the table in the order in which they are published:—

	Grammes.
Binioidide of mercury	0.025
Bichloride of mercury	0.07
Nitrate of silver	0.08
Iodine	0.25
Chlorine gas	0.25
Bromine	0.60
Sulphate of copper	0.90
Salicylic acid	1
Benzoic acid	1.10
Mineral acids	2 to 3
Essence of bitter almonds	3.20
Carbolic acid	3.20
Pernanganate of potash	3.50
Arsenious acid	6.00
Hydrate of chloral	9.50
Salicylate of soda	10
Sulphate of iron	11
Borax	70
Iodide of potassium	140
Glycerine	225
Hyposulphite of soda	275

To prevent the dispersion of microbes from the sick he advises treating the dejections of patients with the following solution:—

Sulphate of copper	20 grammes.
Sulphuric acid (66°)	40 grammes.
Water	1000 grammes.

Also the bathing of the bodies of patients with a solution of iodine 1 part to 1000, or of bichloride of mercury 1 to 5000.

VITAL STATISTICS.

In commenting upon the valuable reports of the British Registrar-General, a modern writer (Dr. Rumsey) styles them the first text-books in the study of hygiene.

The series of Registration Reports of Massachusetts have reached their present stage of perfection only through a gradual introduction of successive features, authorized by efficient legislation.

Michigan, Vermont, and several other States have for several years conducted a similar work, and New York is about to inaugurate the work of registration for its large population. A uniform plan or system adopted by all the States would afford a combined result of great value.

A series of papers on Vital Statistics recently begun in the *Sanitary Engineer* by Dr. John S. Billings, U. S. A., will be welcomed as a valuable contribution to this department of State medicine. The first paper is mainly definitive, and gives the meaning of the terms mortality rates, expectation of life, mean duration of life, probable duration of life, and specific intensity of life. In the second paper he discusses the question of the probable and possible errors and variations in statistics, independent of the accuracy of their data or of their relations to sanitary condition.

² Vierteljahrsschrift f. öff. Gesund, 15 B., 3 H., 1883.

The frequent publication of information relating to this important subject and its general diffusion amongst professional men is desirable, that every physician who has to do with the initial and the final stages of human life may recognize the necessity of making careful records of all essential data, and of contributing his individual share to the common welfare of the State.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

OCTOBER 22, 1883. DR. CHARLES D. HOMANS presided.

DR. JOHN HOMANS read a paper on

TWO-HORNED UTERUS (UTERUS BICORNIS), THE LEFT HORN NOT COMMUNICATING WITH THE VAGINA. SUPRAVAGINAL REMOVAL OF UTERUS, FALLOPIAN TUBES, AND OVARIES. CURE.¹

DR. Homans spoke of the value of auscultation. When the aorta can be heard the tumor is generally ovarian. This patient was eighteen years old, and well and strong. Operations have been commonly done as a last resort on feeble patients.

DR. J. P. REYNOLDS had listened with deep interest to this remarkable case. Beside the intrinsic importance of the record such histories are also of great value to the profession here and everywhere in the increase of courage that they bring to those who hope to find in a new appreciation of Cæsarean section, in Porro's operation, or in its modifications, chance of escape from the horrors and the disgrace of craniotomy. The resort to the latter dreadful alternative implies for the obstetrician an admission that his work has failed. The statistics, inestimable in worth, which our countryman, Dr. Robert P. Harris, has with conscientious toil laid before the profession, bid fair to compel us to rewrite the history of operative obstetrics. What may not be hoped for our art provided Dr. Harris's teaching as to the paramount importance of timely resort to operative measures becomes generally appreciated by medical men, while at the same time successes like that reported to-night have trained up in one community and another surgeons who when called will be found equipped for the work.

May we, if the demand comes, be enabled to add from this neighborhood yet one more triumph like that which Dr. Eliot Richardson, in Baltimore, has within a few months achieved. Each such instance brings help to many others beside those whom it immediately concerns. Dr. Homans' case is unique, and it is matter for congratulation that such an operation can be done in our neighborhood.

DR. W. E. BOARDMAN had never met with a report of a case of the kind, and was left to inquire if in future, if the diagnosis were made, the surgeon would feel authorized to attempt removal. There have been, perhaps, a dozen cases similar to this one which have been recognized during life, and have been relieved by opening from the vagina or rectum. The tumor projects into the vagina or parallel with it, and that is given as one of the diagnostic marks. Many cases of

hæmatometra with atresia vaginæ have been relieved by an artificial vagina, and these patients have menstruated, and have, if he is not mistaken, borne children. He did not raise the question as a criticism of the paper, but for the purpose of starting discussion, and he expressed no opinion himself.

DR. Blodgett's report sustains the general statements of writers as to the conditions found in the anomaly. The bearing of the case on the study of menstruation is noticeable. Here the tube had no communication with the uterus, but nevertheless contained grumous matter pointing to the probability of menstruation. There is every reason to suppose it came from the tube in which it was found. The question of development forms an interesting study, and every case may contribute much towards the solution of the inquiries as to their diagnosis and treatment. In the only case of the kind met with by the speaker the vagina was double, the larger sac being blind. The patient applied for the relief of sterility, coition having taken place in the blind opening.

DR. REYNOLDS, while admitting, as he thought every one must, the very exceptional character of the case, asked if the account of it did not show that an opening into the vagina would have failed to give relief. The second sac, having no connection with the enlarged horn, already torn at one point, and discharging into the peritonæum, could not possibly be reached.

DR. BOARDMAN thought it did in this case, but that it is an extreme one, and could not have been recognized. He thought most surgeons would hesitate, and asked the reader what would be his course should he meet a similar case, and make a diagnosis of occluded horn.

DR. HOMANS said it is a hard question to answer without more study. Much of the success depends on the completeness of antiseptic precautions, which are hard to carry out in a wound opening into a mucous cavity. He could not reach the os, and the tissues through which a drainage tube would have passed were thick. The tube must be large, ought to be a double current tube, with the end in a vessel of carbolic acid, and must be sewed in. He should have expected a long, tedious convalescence, with rises of temperature. Then the artificial opening would probably close on withdrawal of the tube, leaving the patient as badly off as before. If the uterus had been distended and elastic, with a well-marked presentation of the os, he thinks tapping through the vagina might, perhaps, be the better operation. He did not know anything more before the abdominal section was made than that he had a thick-walled tumor full of fluid to deal with. He does not think aspiration of ovarian tumors through the vagina a particularly fortunate operation, and puncturing the imperforate hymen has often been fatal. Having punctured and got a slow recovery you cannot then change the operation. He thinks acting on surgical principles and succeeding points to an operation as a good one.

To a question of Dr. Boardman's he answered that the tumor formed a globular mass one and one half inches within the vulva. If he felt sure of succeeding in another case like this one he would adopt the same method.

DR. BOARDMAN said that although in cases of atresia of the genital tract where puncture has been made through the rectum the results have often been fatal from septicæmia, yet that good results have been ob-

¹ Vide page 436 of this number of the JOURNAL.