

# BARRING THE PLAGUE

## THE NEW PROCESS OF DISINFECTING THE MAILS.

Its Results Described by Medical Experts—No Germs Escape the New Gas—How the Machinery Is Put into Operation.

THE prevalence of yellow fever in the Mississippi Valley has added greatly to the interest that has been excited in the ranks of the medical profession, and among the public generally, by the experiments that have been going on for several months at the quarantine station of the port of New York to determine the value of the new disinfectant in quarantine work. It can well be called new, for although it was partly discovered in 1868 by the German chemist, A. W. Hoffman, it was not until 20 years after that the French investigator, A. Millat, found, as the result of his experiments, that it was valuable in preventing or delaying decomposition. After four years of close study of its properties and effects, M. Millat exhibited the results of his labor on the germicidal properties of formaldehyde to the French Academy of Sciences, where the subject was considered with close attention. This gas was first revealed to Hoffman, the German chemist, in some experiments he was conducting, and was produced by heating a platinum spiral in a lamp burning wood alcohol.

The need of a new disinfectant has been recognized by the quarantine authorities for some time, and accordingly the experiments that Dr. Alvah H. Doty, health officer of the port of New York, and Dr. E. J. Lederle, chemist of the health department and consulting chemist at the quarantine station, were conducting, were watched with keen interest, and the results were

quarantine station, nourished these germs to their highest degree of virulence, inoculating with them occasionally white mice.

Twenty different tests, each employing three or more varieties of germs, were made by Dr. Doty, and have been minutely described by him. These experiments were conducted on the steambot James W. Wadsworth, and also at the laboratory in a room specially prepared, in which there was an apparatus for spraying liquified ammonia gas about the room, for the instant neutralizing of formaldehyde, if considered necessary to do so. In conducting the first experiments from four to eight ounces of the disinfectant were exposed for various periods of time in an air-tight steel box, containing 115 cubic feet of space, and also in a room containing 1,000 cubic feet of air space. In fifteen tests of all the cultures of various diseases, only that of diphtheria showed subsequent growth. In the case of the latter four ounces of solution were used, and the exposure continued for twelve hours. The cultures of all the diseases were wrapped in a woolen blanket.

In other tests, plague, diphtheria and anthrax germs on a linen disc, some wrapped in a pound of newspaper, others wrapped in a blanket, held on to life after an exposure of twelve hours, a quart of the solution being used. Others were generally killed that were put inside a single newspaper, or inside a sheet of paper, and an envelope, or inside a towel. These tests were all made in a vacuum as offering less resistance to the penetration of the gas. The tests were repeated without the gas being destroyed after four hours of exposure, survived, and in the case of some diphtheria germs wrapped in a newspaper, growth was observed.

It was found in preparing the gas that the use of a solution of some neutral salt caused the gas to be given off more satisfactorily, and a machine for extracting it more readily was employed. In this case the disinfection of the mails was accomplished in a very satisfactory degree, as every germ of cholera, plague, anthrax and diphtheria were destroyed after four hours of ex-

esses, although non-toxic to all the higher forms of life.

## FILIGREE WORK.

An Effort Is Being Made to Create Demand for It.

An effort is being made to create a demand for filigree work, in order to open up a new field of labor for workers whose deft fingers are their fortunes, says the Philadelphia Times. At a recent fair held in a large city a booth filled with an assortment of jewelry in glittering filigree work attracted considerable attention. As every article shown at the fair was of native manufacture, the pretty ornaments were adaptations of foreign work of great antiquity and renown. The stock consisted of lacelike trinkets of simple design and construction, including inexpensive bracelets, brooches, scarfpins, pencils, buckles and other trifles, in which the daisy was the chief design. Artistic specimens of this work copied from original designs from Italy have been made and exhibited in this country. They were usually the work of patriotic amateurs, who found that untrained fingers lacked the wonderful light touch and dexterity almost an heirloom to the workmen of Scandinavia, Genoa and Malta. Filigree work is an ideal and fascinating occupation for women who like creative employment and something more tangible as a result of their labor than painted cups or embroidered table covers. A young woman whose noisy profession is brass hammering has added filigree work to her course of lessons, and has already a large class of pupils. To her the charming art seems like play, and while she talks to me her nimble fingers show the pliability of the silver or gold wire by twisting it into spirals and any convoluted forms to delineate flowers, butterflies, arabesques and other airy devices, which all have a surprising air of elegance. This delicate wire is, indeed, the only material employed, as designated by the name of the work—filigree, from the Italian filigrano (filo, thread, and grano, a grain). The wire is sold in long reels in three different shades of gold or silver. It is cut with a tweezer into numberless and graduated lengths, after the style of needles, and kept loose in a cardboard tray, ready for use. The rudimentary lessons in the craft include the shaping of little daisies or insects, easily concocted by the amateur in soldering or any strengthening calling for the help of a professional moulder, while practice in the more advanced stage is only permitted in a scientifically equipped workshop. Nevertheless, some kindergarten teachers, too, are utilizing this charming occupation, if not trade, for young, tasteful and clever workers, and find that it exercises a perfect fascination over the children.

## Night Photography.

An automatic photograph of a deer, taken at midnight, is one of the latest marvels of photography. This was secured by means of an automatic arrangement devised by Charles Hughes of Red Bluff, Cal. By a mechanical device the deer, in touching a linen thread while moving along a trail at midnight put in action the movement which opened the camera, flashed the magnesium powder and then closed the shutter.

## Late Hours and Health.

A German doctor, who has been collecting information about the habits of long-lived persons, finds that the majority of those who attained old age indulged in late hours. Eight out of ten persons over eighty never went to bed until well into the small hours, and did not get up again until late in the day.

Artificial Teeth for German Soldiers. The German war office has determined to furnish artificial teeth gratis to such soldiers as may need them.

## PARAGRAPHS WITH POINTS.

Now will somebody kindly rescue Miss Cisneros from the clutches of the New York Journal?

A Denver bank teller disappeared leaving his accounts all right. He evidently forgot something.

Emperor William's aversion to wheels may be due to the fact that he has enough in his head.

The best way for Georgia to reform her penal convict system is to convict the men who are responsible for it.

Emma Goldman, the New York anarchist, is in St. Louis. She got in before the town could be quarantined.

Col. Nellie Ely of Gov. Bob Taylor's staff is to be married soon. The wedding will doubtless be a great military event.

A Tammany orator, in a recent speech, exclaimed: "To hell with reform!" That is good machine politics doctrine.

Train robbery is now a capital offense in Missouri. It has long been regarded as a capital idea by some Missouri citizens.

Miss Maude Gonne is by no means the first pretty Irish girl that has come to this country, but few of them have had so enthusiastic a reception.

Nat Goodwin says he intends to play Shylock this season. This seems to involve a reversal of conditions. The Shylocks have been playing Nat for years.

Speaking of the new Mississippi senator, a Chicago newspaper says: "Money of Mississippi has some political strength." And money of every other place has some political strength, also.

A Paris jury has distinguished itself by acquitting two criminals who had confessed their crime in court, and whose lawyers had only pleaded for a light sentence.

# WAITING FOR DEATH.

## MRS. M'KINLEY CONSTANTLY GROWING WEAKER.

Members of the Family at the Bedside of the Patient Waiting for the Final Summons—The President Soon to Return to Washington to Give Attention to Official Duties.

## In the Shadow of Death.

CANTON, O., Dec. 4.—President McKinley will be in Washington for the opening of congress next Monday whatever may be the issue of his mother's illness. Although there has never been in the history of a government a case exactly similar, it is necessary for the president to be at the capitol in person for the opening of a session of congress from the two houses, and that until this committee has awaited upon the president and received his communication, the regular business of congress cannot proceed. Mother McKinley is unconscious, and the attending physician can give the family no hope that she will ever return to consciousness. The president can do absolutely nothing for her by remaining here. In view of these facts, the president feels that it is his duty to return to Washington so as not to delay the opening of congress at the regular time. He has arranged to leave Canton at 2:05 o'clock tomorrow afternoon in the special car provided for him attached to the regular Pennsylvania train, which reaches Washington Sunday morning.

Assistant Secretary of State Day expects to return to Canton early next week. He will leave Washington as soon as possible after attending the functions of the opening of congress. Yesterday was one of great suspense in the McKinley home. The nearness of the messenger of death was realized every moment of the day, and that there could be no other than a fatal ending of the illness with which Mother McKinley was stricken Thursday morning. The attending physician could give them no hope of a different result, and it is due to the remarkable constitution of the woman she has reached the ripe old age of nearly 89 years without illness of any consequence, that he attributes the fact that the flame of life was not extinguish earlier.

The family surrounded the bedside all day, watching intently for any rally from the comatose condition in which the patient has been since the beginning of the illness, and at short intervals the doctor called. But the word from the sick room was almost without variation, family and doctor announcing from time to time increasing weakness and sinking away.

Only twice was this report varied by the announcement of evidence of partial consciousness. The first was when President McKinley reached the sick room. His sister Helen announced his arrival, saying: "Mother, here is William. If you recognize him hold out your hand." The enfeebled patient seemed to understand and to make an effort to extend her hand, which was immediately grasped by the devoted son. He thought he felt a responsive tightening of her hand about his own as he did so, but the recognition was so slight as to be almost imperceptible.

It was sometime later that a second slight rally seemed to occur. A bunch of beautiful flowers was sent from the conservatory of the white house, and when they were taken into the room she noted their arrival and seemed to make an effort to reach them. The president quickly selected a beautiful white lily and handed it to her. She took it in her hand and carried it to her bosom, it being apparent that she was conscious of the fact and appreciated the flower. Soon after this, about noon, she quieted down into a rest that seemed to be almost a natural sleep.

Mrs. A. J. Duncan, of Cleveland, who was summoned from Chicago, where she has been visiting, was the last of the four living children to arrive, and she came too late to be recognized by her mother. She made no effort on entering the room to gain recognition because it was realized that the effort would not succeed, and that it would only disturb the patient.

Midnight showed no material change in the condition of Mrs. McKinley or the course of the disease. It is surely wearing her out, and she shows greater weakness every hour. The president is still in her room, but will retire to rest at 1 o'clock if there is no material change at that time.

2:30 a. m.—Mother McKinley still alive. No perceptible change.

## Gen. Pando Killed in Battle.

NEW YORK, Dec. 4.—A dispatch to the Herald from Havana, says: A report that General Pando, who was placed in charge of military operations in Cuba by General Blanco, has been killed in an engagement with insurgents in Santa Clara province, has just reached Havana. This report has caused the most intense excitement in the palace and official circles.

No details of the killing of the Spanish commander have been received, beyond the statement that he was shot in a battle with a force of insurgents while on the march from Sagua La Grande to Trinidad.

The president has appointed B. K. Bruce, of Mississippi, to be register of the treasury. Bruce represented Mississippi in the United States senate in the reconstruction days and is one of the best known negro republicans in the country.

## Senator Allison's Position.

WASHINGTON, Dec. 4.—Senator Allison, who arrived in the city last night for the congressional session, said in an interview today: "There will be determined opposition in the senate to the annexation of Hawaii and it will come from men whose ability is not to be gainsaid." The senator says that Hawaii will be taken up before Cuba, if Cuba is discussed at all; that he is willing to follow the president's lead in the Cuban question, that practical currency legislation is impossible in the senate, and that the appropriations will be kept down to the lowest point.

# M'KINLEY AT HOME.

The President Reaches the Bedside of His Stricken Mother.

CANTON, O., Dec. 4.—Yesterday at 8:55 the president reached Canton. His mother was still alive. Upon his visit of his mother and he has since been almost constantly at her bedside. Mrs. McKinley entered the sick room unconscious. The little family group was complete. Now all that remained was to wait for death and hope that before it came the mother would be able once more to recognize her loving children.

His cousin, Charles R. Miller, Judge McCarthy and G. B. Freese met the president at the station with a carriage, which hurried him to the home of his mother and he has since been almost constantly at her bedside. Mrs. McKinley remained apparently in the same condition as at the early morning. She was unconscious, showed no evidence of suffering and seemed to be passing quietly into the sleep of death. There was no encouragement given the family by the attending physician, Dr. Phillips, who seriously doubted that the patient would survive. He feared that the end was near, but said there was a possibility of her lingering for several days. Of her four living children, three were at the bedside, and Mrs. A. B. Duncan of Cleveland, who has been visiting her daughter at a Chicago school was expected at 1:30.

President McKinley believes his mother recognized him as he knelt at her bedside. His sister, Helen, announced his arrival by saying: "Here, mother, is William; if you recognize him hold up your hand." Mrs. McKinley did raise her left hand slightly, and the family believe it was in recognition of her son. He grasped her hand fondly and says he seemed to feel a slight pressure from the mother's effort to return his greeting. This was the only incident of the sick room of today. The family continued about the bedside, but except a continued weakening they could note no change.

## Receipts and Expenditures.

WASHINGTON, Dec. 4.—The comparative statement of the government receipts and expenditures shows the total receipts for the month of November, 1897, were \$45,363,606, of which \$18,144,618 was received from the reorganization committee of the Union Pacific railroad, making the ordinary receipts for the month, \$25,168,987. The total expenditures for November were \$27,810,838, of which \$4,549,368 was cash in the Union Pacific sinking fund turned into the treasury repaid to the appropriation from which it had been originally deducted for investment. Hence the month's disbursements include this sum, leaving a deficit of \$8,092,483.

The receipts from customs were \$9,820,025, a falling off of about \$100,000, as compared with November, 1896. The receipts from the internal revenue were \$13,520,649, a gain of about \$430,000 for the month.

The excess of expenditures over receipts for the five months of the present fiscal year, independent of the proceeds of the sale of the Union Pacific railroad, was \$46,101,494.

The government has received another payment of \$8,100,000 on account of the Union Pacific sale, which still leaves due from the committee \$34,163,605, to be paid in four equal installments, the last on January 9, 1898.

## Favor Hawaiian Annexation.

WASHINGTON, Dec. 4.—Senator Stewart of Nevada, who arrived in Washington on Wednesday, today says the people of the Pacific coast generally favor the ratification of the Hawaiian annexation treaty. He expressed the opinion that the treaty would not consume a great deal of time in the senate. The treaty occupies first place on the senate's executive calendar.

Senators generally agree that there are no questions in connection with the treaty that could not be properly presented in open senate, and there is little doubt that an effort will be made to consider it in open session.

Senator Harris of Kansas announced today that he was opposed to annexation. He has heretofore been undecided.

## All About Alaska.

Descriptive folder containing five maps of Alaska and routes to the gold fields; the most complete publication of the kind in print. Send four cents in stamps to F. I. Whitney, G. P. and T. A. Great Northern Railway, St. Paul, Minn. "Alaska, Land of Gold and Glacier," a beautifully illustrated booklet, sent for fifteen cents in stamps. The Great Northern is over 100 miles the shortest line from St. Paul and Minneapolis to Seattle and Portland, the outfitting points whence steamers sail for Alaska.

## Preparing for Bryan.

CITY OF MEXICO, Dec. 4.—Resident Americans are taking action for the reception of the Hon. W. J. Bryan in an appropriate manner and without regard to party affiliations. Mr. Bryan will be received with cordiality in all circles here on account of his political prominence as a leader of the democratic party.

A Shanghai special says: A large reinforcement of Japanese troops has arrived in Formosa.

## Cuba's Elect Officers.

WASHINGTON, Dec. 4.—Consul General Lee has informed the State department that the insurgents in Cuba elected and installed at Yaguajay, Porto Principe, on October 29, the following officers: President, Bartolo Masso; vice president, Domingo Mendez Capote; secretary of war, Jose B. Aleman; secretary of the treasury, Ernesto Font Stearling; secretary of foreign affairs, Andrea Moreno de la Torre; secretary of the interior, Manuel R. Silva; general-in-chief, Maximo Gomez; lieutenant general, Calisto Garetia.

# THE PLAN IS TAKING.

## CONGRESS OF TEACHERS DURING EXPOSITION.

Chancellor McLean and State Superintendent Jackson Join Heartily in the Scheme—A Congress of Educators, National in Scope, a Most Desirable Object.

Proposed Congress of Educators. A Lincoln correspondent of the Omaha Bee writes that recent newspaper articles relative to the proposed congress to teachers, to be held at Omaha during the exposition next year have attracted much attention among the teachers and people interested in educational work in that city, and the ideas meet with general approval.

Chancellor McLean, of the University of Nebraska, speaking on the subject, said: "I am in favor of the proposition to have an educational congress at the Trans-Mississippi exposition. I believe such a congress is assured, if for no other reason than that the bureau of education of the Trans-Mississippi exposition will at once take hold of the matter of organizing it. Their resolutions upon the subject are excellent. I would not limit the congress to transmississippi states. These states, in common with adjacent states in the great midlands, have a common and genuinely American school system. Over and above the common interests and purposes of these states this purely American educational system will afford opportunities for the discussion of problems that will be far-reaching in their importance. A great provincial meeting of this sort has its place in addition to the national assembly. The establishment of associations of secondary schools and colleges within the bounds of the great divisions of the country recognized in the United States census, show the need for more general and democratic conferences such as the one proposed at the Trans-Mississippi exposition. I think it likely this congress will become a model for others. I am confident that the school men of the region will co-operate and that distinguished educators from elsewhere will be glad to come to us. I am sure the University of Nebraska will do its part and that other colleges and sister state universities will fall into line."

State Superintendent Jackson was quite enthusiastic over the plan. He said: "I believe that no better movement could be made for the advancement of education in the trans-Mississippi territory than by planning for a trans-Mississippi congress of teachers. I base my opinion of this on the results of the work of the congresses at the World's Columbian exposition, from which wider benefits have resulted than from any similar congresses yet held, because of their connection with that great exposition, and because of the wider and fuller representation of the countries of the world. Omaha is so near the geographical center of the United States that it should offer great inducements to educators from all of the states to attend. I can see no way in which it will conflict with the National Educational association, and I am not sure but the trans-Mississippi territory might well afford to make this a permanent organization that should hold meetings annually at a time that would least conflict with the interests of the National Educational association. The results of such an association of educators would be most beneficial and lasting. I am confident that the teachers of Nebraska will be strongly in favor of such a movement and I am sure this department will do everything in its power to assist in this great enterprise. I expect to attend the meeting that has been called at Omaha, that will be held for the purpose of discussing this matter."

## Romance in Real Life.

York dispatch: If events progress smoothly, William Bell, an old soldier of this place, will soon be the hero of quite a romance. Twelve odd years ago Mr. Bell lived at Quincy, Ill., and was engaged to be married to a young woman of that place. He left for Australia and failed to come back at the scheduled time. The prospective bride, after waiting for a number of years, was married to another man. The other day Mr. Bell was granted a pension and several years' back pay besides, and he took a trip to his old home. He met the woman he was once going to marry, who is now a widow. Her husband was killed a few years ago in a railroad wreck and she was awarded \$10,000 damages by the company. She is well-to-do and as Mr. Bell feels rich in the possession of his pension money, the two will renew the matrimonial agreement they entered into years ago and pool their fortunes.

## Williams Bound Over.

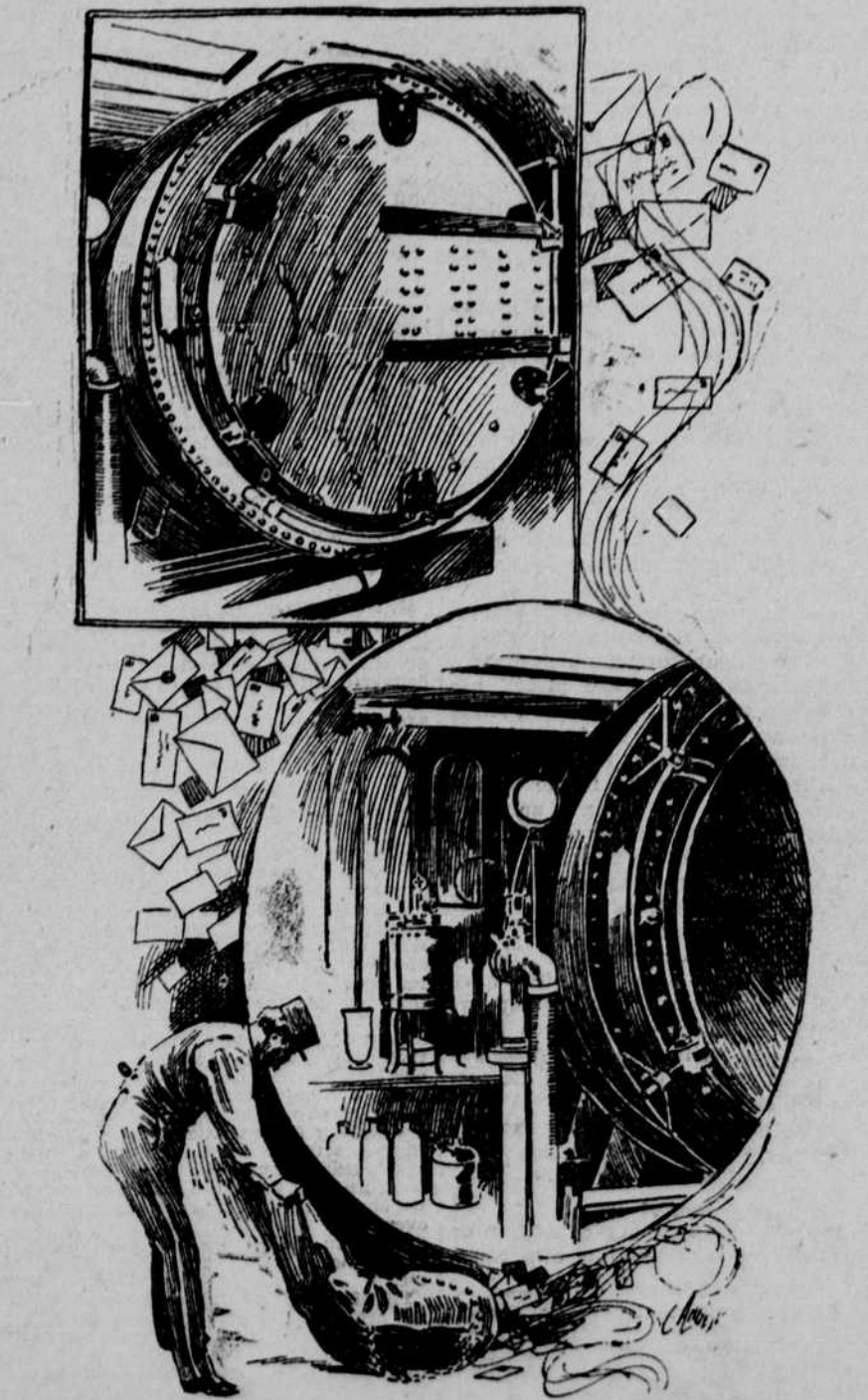
Wilburn L. Williams, the man who is in jail in York for eloping with Mildred Carnahan, appeared before Judge Wildman, and through his attorney, George B. France, had the preliminary trial continued until the 18th. Williams was placed under a bond of \$500, but was not able to give it, and was recommitted to the county jail.

## Cattle Feeding.

This year, says a Central City dispatch, promises to be a record breaker as more sheep and cattle are being fed than ever before in the history of the county. A large portion of the corn is yet to be husked and from present indications is liable not to be husked before spring. Several inches of snow is now on the ground.

## Stock Exchange Answers.

The South Omaha Stock yards exchange has filed with the clerk of the circuit court an answer to the suit instituted a short time ago by the government to bring about the dissolution of the exchange on the ground that it is existing in violation of the anti-trust law of 1890. The answer was drawn up by Attorney Warren Switzer and T. J. Mahoney, who are acting as counsel for the members of the exchange. Its entire gist is a denial of the main issue raised by the government, that the exchange is a monopoly, and that it puts restraint upon interstate commerce.



HOW THE YELLOW FEVER GERMS ARE DESTROYED.

awaited with lively concern. This was more particularly the case because many disinfectants, such as sulphur dioxide and chlorine have not been relied upon with as much confidence as formerly since the germ theory of disease was accepted as correct. Steam has been largely used as of unquestioned value, but it is not always available. When the disinfecting steambot James W. Wadsworth, can be brought in play, steam is readily available, as that steamer has a chamber specially fitted up for such work.

But it was necessary to secure an agent fully as efficacious but more readily adaptable, and it was to this end that Drs. Doty and Lederle pushed their series of experiments. These experiments have extended over several months, and comprehended an elaborate series of tests, patiently and carefully made, in order to determine whether it was safe to rely upon formaldehyde as a substitute for steam in disinfecting operations. Different bacilli of disease, such as the organisms of cholera, diphtheria, Indian plague and anthrax, were used to test the new gas. The plague cultures (bacilli) nourished by selected food) were most carefully selected. They were received from Prof. Haffkine in Bombay, the Pasteur Institute in Paris, and the Hoagland Laboratory in Brooklyn. Dr. Fitzpatrick, the bacteriologist at the

posure. The infected discs were wrapped in blankets, paper, or envelopes. A pint of formaldehyde was used. Diphtheria and anthrax germs wrapped in three sheets of paper and envelopes, with the seams extra gummed, were all exterminated. Eight ounces of the disinfectant destroyed the cultures when they were wrapped in blankets, in this case twelve hours of exposure being taken. Only the cholera germs were killed, and those of plague, diphtheria and anthrax remained active when the last test was repeated for a duration of only the half the previous tests.

The value of the new agent for superficial disinfection is considered of unquestioned value by Dr. Doty, and he will use it for general purposes, especially in disinfecting ships which are infected with disease. But Dr. Doty does not consider that it can be relied upon in cases where deep penetration is required. It has all the penetrative powers required for disinfecting mails and ordinary articles. From experiments conducted with fowls, insects, mice and guinea pigs it was proved harmless to animal life.

Dr. Lederle's chemical analysis of the gas and examination of its properties and possibilities resulted in his finding that formaldehyde may be injurious, if taken internally, to the digestive process.