Straw Rides Prompt Service
RUPPERT BROS.
Govans Transfer
Local & Long Distance Moving
6000 YORK ROAD
GOVANS, MD.
Telephone, Tuxedo 2142

In time of death refined families want service and dignity without extortion or misrepresentation.

And so, for half a century they have turned unerringly to

STEWART and MOWEN CO.
(Wm. F. Wooden, Successor)

The high character of our ever-increasing clientele speaks for itself.

And we are specially equipped for immediate attention to country and suburban calls.

108 West North Avenue
Baltimore • • Maryland
Telephone Vernon 1342

WE SERVE YOU RIGHT TO YOUR DELIGHT.

REGAL LAUNDRY
MAIN OFFICE
GILMOR AND MOSHER STS.
BALTIMORE
SUBURBAN DELIVERY

Clothes Make The Man.

Our custom tailored clothes are most economical, perfect in fit, and are tailored individually for you. Our repairing, altering, pressing, dying and cleaning is done by experts. Remember, we also specialize in Ladies' Suits made to order. Our prices are reasonable and we guarantee service and satisfaction.

S. FISHER
The Tailor
5308 York Road
GOVANS, MD.

ORIENTAL RUGS
The
PERSIAN RUG CO.
Importers
919 N. Calvert St.
BALTIMORE, MD.
Established 1900
Cleaning, Scouring, Renovating, Repairing and Weaving

GERMS THAT WE BREATHE---CHANCES FOR INHALING NUMEROUS IN PUBLIC

Microbes, Leaving Lungs Of Careless Person, Are Sent Upward And Outward To Hundreds Of Thousands Of Fellows.

An unusually clear amount of the onset and course of diseases caused by breathing in germs that float in the air is given by Dr. Arthur I. Kendal, dean of Northwestern University Medical School, Chicago, in his recent work entitled "Civilization and the Microbe" (Boston, 1923). Chief of these diseases, he says, is the "white plague," tuberculosis. The germ that causes the infection is named the "tubercle bacillus." This microbe, leaving the lungs of a careless consumptive, is sent upward and outward with hundreds or even thousands of its fellows, and scattered in the air about. Droplets, very miunte but large in comparison with the microbes, may remain suspended in the air for an indefinite period. Currents of air may waft these infected droplets for many feet or yards. In theatres, cars, and crowded schools the chances of inhaling them are very numerous. Dr. Kendall goes on:

The question may fairly be asked: How does one know that infected droplets of sputum may be carried for considerable distances through the air? Fortunately, a crucial experiment has been performed which exactly fulfils the essential conditions under discussion.

A harmless microbe, known as Bacillus prodigiosus, was selected as the test germ. Bacillus prodigiosus grows readily upon many organic substances, and it is sometimes found in the air. In the early part of the nineteenth century, the city of Padua was greatly excited by the appearance of blood - red spots which appeared upon the bread exposed on the altar in one of the churches. This was called the "miracle of the Bleeding Host" by the peasants, but it was soon discovered that the red colorations were due to growths of Bacillus prodigiosus, which was identified by an analysis of the air.

To return to the experiment: A small amount of Bacillus prodigiosus is introduced into the mouth of a demonstrator, who takes his stand at one end of a room previously prepared for the experiment by exposing at various levels and places dishes of steril gelatin. If the room is shown by previous experiments to contain no microbes capable of growing as red-colored spots on the gelatin, it may be assumed that the appearance of red growths on the gelatin plates, after a riod of hours, represents the microbes that have been actually transmitted through the air when the experimenter talks, coughs, or sneezes. The results of many trials have shown quite definitely that microbes are actually expelled from the mouth of an individual. Also, they may pass through the air and lodge in the nose or mouth of another individual.

In the experiments with Bacillus prodigiosus, growths were obtained in the uttermost corners of the room, about 40 feet distant, and, in one instance, the microbes actually were driven by a gentle current of wind from the experimenter's room through a hall an dup a flight of several stairs!

Quicker results may be obtained by a chemical method, if only the actual transmission of droplets is to be demonstrated. Sheets are dipped in a weak solution of bicarbonate of soda and hung around the room at various points. The experimenter places a small amount of a colorless solution of an anilin dye, known as "phenol-phthalein," in his his mouth, and then talks or sneezes or coughs. The dye turns a bright red when it reaches the alkaline soda solution. Very soon after the much as phenolphthalein is never a constituent of the air, it is very clear that some of it must have traversed the air space betweei the speaker's mouth and the point of lodgment on the sheets The evidence that droplets may pass from the mouth (or nose) to points some distance away seems very conclusive.

Tubercle bacilli, or the microbes of any infection that may be breather or sucked in —whooping-cough, pneumonia, scarlet fever, measles, influenza, colds—may thus be coughed out from one patient and transmitted through droplets to other victims. The tubercle bacillus is fairly illustrative of the process, although it is a chronic ,long-drawn-out disease in contrast to "flu," whooping-cough, and other well- known acute respiratory infections. Dr. Kendall goes on to say:

To return, then, to the tubercle bacillus, which has been coughed or sneezed into the air from the depths of the lungs of a careless consumptive—the infected droplets either gain access directly to the nose or mouth of a nearby innocent bystander, or the bacilli may remain in the air for a period of time and then be drawn into the respiratory tract of the victim. In rooms, the microbes may remain on the floor, if they are not inhaled by a patient, and, later on, be raised with th efloor dust by sweeping or other disturbance, and then gain access to a man.

A baby creeping over such an infected floor may be quite readily invaded by tubercile bacilli as may guinea-pigs which have been deliberately exposed to floor dust with fatal results.

If the tubercle bacilli do gain access to a man through infected droplets or dust, they may pass through the series of barriers that are designed to keep microbes from the depths of the respiratory tract. These are: the moist, tortuous course of the nasal mucuous membrane ,the upward thrust of the deeper bronchi, and probably also the projectile-like effect of coughing which tends to remove irritant or foreign particles from the respiratory tract. Also, migratory cells bably also the p-H Bthou— and mucuous cells protect the deeper parts of the respiratory tract by surrounding or engulfing foreign substances.

Let it be assumed that the tubercle bacilli have run the gauntlet of this entire line of defense and have reached the minute, sac-like enlargements of the terminal bronchioles. The microbes then become attached to the wall of the alveoli and grow there. Gradually a more or less spherical mass of cells forms, layer after layer, becoming larger and always larger, in a vain attempt to hem in and restrain the growth of the invaders. This is called, very appropriately, a "tubercle." Sometimes the body succeeds in throwing enough of these cells and their products around the nidus of microbes to keep them in check, or even kill them. Sometimes the offensive of the body suffices merely to keep the microbes from growing. They remain alive and latent, but ready to start anew their campaign of conquest if the effectiveness of the barrier is overcome by excesses of various kinds, colds, intermittent infection, or other disabling agency.

In this event, the onward march of the microbes is again in evidence, and the ever-widening and ever - weakening lines of defensive cells of the lungs thrown around the enemy in their midst become so drawn out that the older and more central cells lose contact with the blood. Nutrition stops, the cells die, and then a cavity has formed in the lung tissue. The area of softening increases in diameter and a time comes when the edge of the area reaches a bronchus in communication with the outside world. The cheesy contents of the cavity empty into the channel communicating without and the irritation of the semifluid substances incites coughing. The tuberculous sputum raised by the effort of coughing (which is repeated for days at a time) contains a multitude of tubercle bacilli free from the body and ready to be wafted to other hosts.

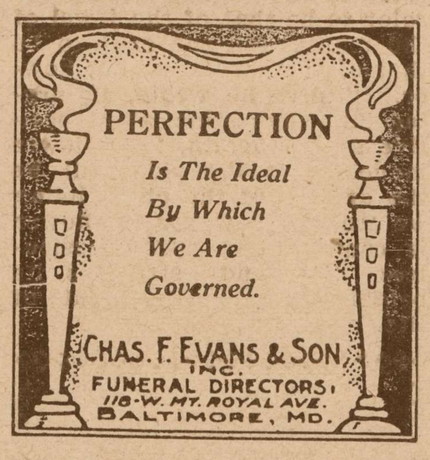
There is much evidence to show that fingers, eating utensils, and other agencies whose destination is, or may be, the mouth, may carry tubercle bacilii from consumptlve to prospective victim.

Sometimes the tubercle bacilli, growing rapidly in the lungs, erode through a blood-vessel that may happen to be in the mass of the tubercle. The microbes then enter the blood-stream, and are carried to all parts of the body. Defenses are lacking at the new points of invasion, and a rapid development of tuberccles occurs which soon overwhelms the patient. Acute miliary tuberculosis, as this process is sometimes called, does not resemble the ordinary clinical picture of tuberculosis; it strongly resembles the course of a case of typhoid fever. This form of tuberculosis is very fatal to the tubercle bacilli. The patient dies too soon, as a rule, for the microbe to establish a connection with the outside world. They succumb with their victim. None survive to reach other hosts. Miliary tuberculosis is not contagious.

Tubercle bacilli are sometimes carried from tuberculous cattle to man through their milk. The portal of entry to the tissues is through the alimentary canal in such cases, an dthe disease is not transmissible from man to man so far as available information indicates. This form of tuberculosis—bovine tuberculosis—is, therefore, not a matter of concern to the student of epidemics.

The general phenomena of infection of the respiratory tract by microbes that are "progressively pathogenic" — that is, that cause disease from man to man—are, on the whole, much like tuberculosis, except that the process is usu-

The Art Photo-Engraving Co., Inc.
MAKERS OF PRINTING PLATES
ARTISTS—ENGRAVERS
109 S. Charles St. Baltimore, Md.
Plaza 3004

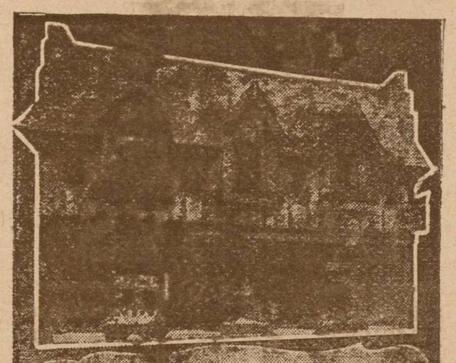


Kincaid-Kimball
Clothes
One-Fourth Off
Payne & Merrill
315 N. Charles St.

From Horse Drawn Vehicles to Big Packard Motor Trucks, We Have Served You Continuously For Fourteen Years.

NO LOAD TOO SMALL—NONE TOO LARGE

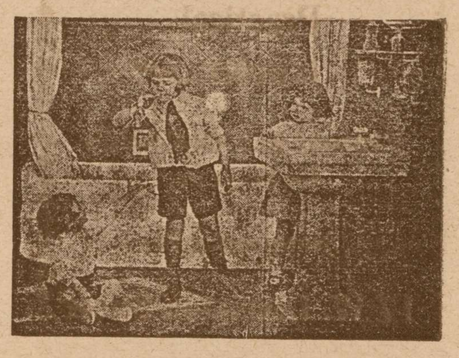
HOPWOOD'S EXPRESS
306 S. Paca Street Baltimore
Phones Calvert 0119-0988



You will appreciate the tasty form in which food comes to you at

SHELLY'S
136 W. Fayette St.
Baltimore, Md.

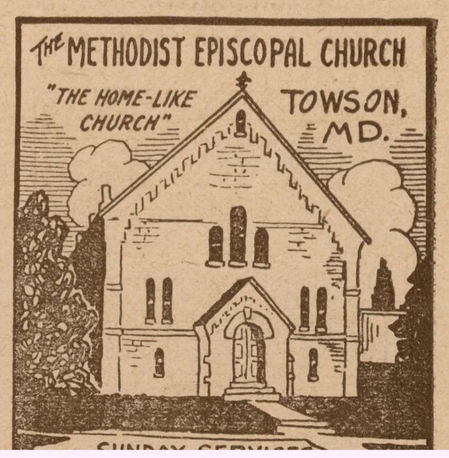
Particularly those Famous Sea Food Dishes



Competent Plumbing Is Essential To Good Health

Throughout Baltimore County hundreds of satisfied people will testify to the efficiency of my work and the moderate charges.

S. L. HOWARD
Phone, Towson 110 TOWSON, MD.



© Maryland State Archives mdsa_sc3410_1_81-0843.jpg