

Dr. Hueppe, in a recent work, has undertaken to find a common ground on which the two theories may meet. His conception is that the cholera bacillus may, like most pathogenic bacteria, exist in the saprophytic state. Frankel has demonstrated that it finds in the superficial layers of soil the necessary conditions of temperature, that it resists desiccation and putrefaction and the rivalry of other species.

It leaves the soil not matured, as Pettenkofer claims, but vigorous and capable of resisting the action of the gastric juice when, by deglutition of saliva, respiration, drinking water, or alimentary substances, it has reached the stomach. It develops in the intestinal canal, producing the toxic agents that impart to cholera its frightful character. When it leaves the human organism it ceases to be infectious, and recovers its virulence by contact with the air or in the soil. If air and oxygen are deficient, the germ perishes. If both are present in small quantities, it can lead an aerobic existence at the expense of the materials it encounters.

GOLD AS A THERAPEUTIC AGENT.

By C. J. S. THOMPSON.

THE use of gold as a medicinal agent is of considerable antiquity, dating back to a very early period, and like mercury, whose action it much resembles, it was accounted of great value by the alchemists of old.

Centuries ago, both precious metals and stones were credited with wonderful healing properties, and the diamond, the sapphire, ruby, and amethyst were supposed to have marvelous virtues. The apothecaries of the seventeenth century used it largely as a stimulant, also in the treatment of epilepsy, and it entered as an ingredient into many of their compound elixirs and other preparations.

Culpeper, in his *Physician*, says: "Gold is temperate in gravity. It wonderfully strengthens the heart and vital spirits. In cordials it resists melancholy, faintings and swoonings, also fevers and falling sickness, and all such like infirmities, incident either to the vital or animal spirit."

An ancient poet quaintly remarks:

"For gold is cordial, and that's the reason
Your raking misers live so long a season."

Down to the very early part of this century it was included in most of the pharmacopœias of Europe, and was prescribed largely for syphilis. But like musk and other expensive remedies once frequently employed in medical practice, the internal administration of the precious metal has almost entirely dropped out of use.

The physiological action of the salts of gold may easily be tested, and it is also stated to have diaphoretic properties. It was frequently used by medical men fifty years ago in the treatment of syphilis, many of whom believed it superior to mercury in severe cases.

One of the oldest preparations of gold was known as *crocus solis*, and prepared in several ways. The *crocus solis* of Germany was directed to be made by first making an amalgam composed of one part of gold and six parts of mercury, and triturating it with twice its weight of sulphur. It was then heated in a crucible till the mercury and sulphur became dissipated, and the gold remained in the form of a brown powder. Another method of preparation, also, was by precipitation, as follows:

R Divided gold.....q. s.
Acid. nitro-hydrochlor.....q. s.

To dissolve the metal, dilute the acid solution with twelve parts of water, then add a solution of potash to excess. Wash and dry the precipitate thrown down.

A frequent old fashioned method of administering a preparation of gold was by rubbing it into the gums or over the tongue.

Crocus solis formed the base of several preparations, such as Kornmann's panacea, in which it was combined with hydrargyrum sulphureum and oil of cinnamon, also golden hartshorn, that had great reputation as a cordial and sudorific, and was composed of *crocus solis* and prepared hartshorn.

The stannate of gold, well known as the purple of Cassius, was formerly prescribed internally, to be taken in progressive doses of $\frac{1}{10}$ to 1 grain, from $\frac{1}{2}$ to 1 grain being also recommended to be rubbed over the tongue. The metal itself was used in the form known as divided gold, made by forming an amalgam of mercury and gold leaf, in parts of one to six, the mercury being taken up by hot nitric acid, then dried, and the residuum pulverized.

Divided gold was administered in doses of $\frac{1}{2}$ to 5 grains, daily, by rubbing on the gums. It was used also to make the sirup of gold, a preparation recommended in lotions for application to syphilitic ulcers. The formula is given as follows:

R Divided gold.....24 grains.
Simple or gum sirup..... $\frac{3}{4}$ j.

Mix intimately.

The chloride of gold was once frequently ordered in medicine, and usually given in doses of $\frac{1}{10}$ to $\frac{1}{4}$ of a grain daily, and was also used in making the pills. Combined with starch it formed the powder of chloride of gold. The tinctura auri was a somewhat expensive preparation, and made in the following manner:

R Pure gold.....3 j.
Acid. nitro-hydrochloric..... $\frac{3}{4}$ j.

Dissolve and add

Ol. rosamar..... $\frac{3}{4}$ ij.

Set aside until the color of the acid disappears, then add

Rectified spirit..... $\frac{3}{4}$ viij.

The dose of this tincture was from 5 to 10 drops. Another form was aurate of ammonia, known as *aurum fulminans*. It was made by precipitating divided gold from solution in nitro-hydrochloric acid with ammonia, and was prescribed as a diaphoretic, in doses of from three to six grains. It was used in the preparation of the balsam of gold made by dissolving one part of aurate of ammonia in four parts of oil of juniper.

A popular remedy largely used in Continental countries was known as General La Motte's drops, and consisted of aurate of ammonia dissolved in nitric acid, and diluted with rectified spirit. It was regarded as a sovereign remedy in more senses than one.

The bromide of gold has been recently prescribed by several medical men in cases of epilepsy with success. It is given in doses of one-sixteenth to one-tenth of a grain. So it is quite probable we may see gold again come into use in medicine, and its preparations once more on the shelves of the pharmacy.—*Pharmaceutical Journal*.

AGRICULTURAL DEPRESSION.

MR. C. S. RICE, of Lowville, N. Y., writes as follows in the *Rural New-Yorker*:

There are no deserted farms in this vicinity, but many farmers have the spirit of deserters, and are ready to join in the general cry about the low prices of dairy products, and the depreciation in value of farming lands. Perhaps it may be well to recall some earlier experiences, and inquire whether the former days were really better than these.

During the war, and for years after its close, high prices prevailed through depreciation in the value of the paper money when compared with gold, the real standard. As no one wishes or expects a return of civil war, it would be useless to institute a comparison between that period and the present. A state of war is not a normal one, and our country is still suffering from its evil effects. In sympathy with the premium on gold, farming lands advanced in price from 50 to 100 per cent., and farmers who had possessed real capital to the amount of \$5,000 suddenly advanced in apparent wealth to \$8,000 or \$10,000. Some sold their farms and retired from business. Others continued farming and paid debts while the inflation lasted. Nearly all began a course of more expensive living in keeping with what was supposed to be greatly increased capital, sure to produce a corresponding increase of income. Custom has with many all the force of necessity, and a return to the simpler ways and cheap living of former times is regarded as an impossibility. Through changes in the currency and competition with the large amount of cheap, fertile Western land lately brought under cultivation, it cannot be denied that farms in New York have decreased in value until they are now worth no more than they were before the war. The general wail of farmers over the low price of farm products has accelerated this depreciation and forced the value below reasonable limits. They have decried their own property by joining in the declaration that "farming does not pay." It is true that if a man bought high priced land several years ago, and it is still heavily mortgaged, his prospects are not very encouraging; but when there is little or no debt, a family with a homestead farm, fairly well situated, need not raise the question of value per acre. If the fertility of the soil has been maintained, advance or depreciation in price is of no great importance to the permanent owner.

If the present is compared with a former period, the prices of farm products and the amount of necessary farm expenses are the principal items relevant to the inquiry. In the year 1833 the first cheese that found a market beyond the limits of the county was made in Lowville. It was made from a dairy of 15 cows and was kept through the season. In the fall the dairyman learned that his butter and cheese could be sold for cash in Rome, 42 miles distant. He accordingly loaded them into his wagon and drew them to that market, and there sold the butter for 9 cents and the cheese for 5 cents per pound. He returned home so well pleased with the result of his venture that he took measures to increase his dairy to 30 cows for the next year. He was for many years a successful dairyman and amassed quite a respectable fortune in the business. He and his wife made every dollar that they possessed by the labor of their own hands and brains, and, of course, used good judgment in the management of their affairs. This fact is mentioned to show that the business of dairying was more promising than any other at that time. It is evident that if this had not been so, this wideawake man would not have engaged in it. Farmers had tried raising peppermint and distilling oil from it, but after a considerable amount had been expended in building stills, and one or two crops had been sold at a fairly remunerative price, it was found that there was an over-production of oil and the business was soon abandoned. About the time of the introduction of cheese dairying, wool was largely produced here. Large flocks of sheep were kept on nearly all the farms in this vicinity. There was no market for mutton, and as nearly all the sheep died a natural death, the only profit derived from them was from the sale of the wool.

It is manifest that Mr. Bowen when he drew his first cheese to Rome and received five cents per pound for it, was engaged in the best paying business of that day. Think of this, ye discouraged dairymen of today! Five cents per pound for cheese after keeping it through the summer and drawing it 42 miles in a wagon with the mud in many places a foot deep, was not a very great price; but Levi Bowen, a man of sound sense and marked ability, came home from that sale with a face radiant with smiles, and telling every one of his good fortune, went to his work with fresh courage and increased energy. From this small beginning cheese dairying soon grew to be the leading industry of the county and has continued to be such for more than 50 years. Cheese was sold for five cents in 1833. A fair dairy of cheese was delivered at Rome in the year 1842 for \$4.62 per cwt. In 1852 cheese sold for 6½ cents per pound. At no time previous to 1860 did milk manufactured into cheese bring better net returns than it did last year. Eighty cents per 100 pounds of milk was about the average price received by dairy men last year. This is far better than the average of the 20 years between 1840 and 1860. Beef was sold from my farm last year for a higher price than was realized at any time before 1860, and the price of pork was above the average of 20 years previous to that date. Colts have brought 50 to 100 per cent. more during the last four years than at any time before the war. Formerly there was only a limited market for potatoes, and they seldom brought more than 20 or 25 cents per bushel in Lewis County. In 1849 a good farm hand could be hired for eight months

for \$12 per month, and in 1850 for \$13, and in 1861 for \$15. The same class of help was hired this season for an average of \$18 per month. This is an increase of about 50 per cent. in the cost of hired help but for 10 years the greater net profit on the potato crop alone, through better facilities for marketing the same, has more than paid the increase. Railroad freights are higher than they ought to be, and farmers justly complain; but potatoes raised on my farm last year brought 20 cents a bushel more than they would if the canal were the only available method of transportation. Of course this view of the subject is wholly local and limited in its application; but it is a matter of experience. Hired help is perhaps the only item of necessary expense that costs more now than before the war. Coffee is higher, but it is not generally regarded as a necessity, and was but little used in former times. It is also true that whisky is more costly, but I am happy to know that representative farmers have no use for that article.

Farmers expend more for implements than formerly; but tools were never so cheap as at the present time. The opportunity to purchase and use labor-saving implements and machinery is really a very great advantage enjoyed by the farmer of to-day. If he makes the best possible use of improved tools, and so cares for them as to secure their durability, greater profit may be realized through this outlay. If the large amount paid out for tools is a disadvantage to the farmer, perhaps he would better go back to the hand scythe, the hand rake and grain cradle, to the hand fork for unloading hay, and the flail for thrashing grain, and give up the use of cultivators, improved harrows, grain drills and the whole catalogue of implements unknown to agriculture 50 years ago.

In this vicinity well managed farms are as productive as they ever have been. Prices of farm products average higher than they did for a period of 20 years before the war. Necessary farm expenses are not greater than they were then; but family and personal expenses are much larger, and herein is found the principal reason why farmers cannot now save money as they formerly did. Comfort seems to require that a farm house should be carpeted throughout; but, after all, it is a necessity only as custom makes it such. Formerly if there were one spare room in the house and that was carpeted, the requirements of custom were fully met. That one carpet was usually the handiwork of the farmer's wife, and involved no cash expense except for carding the wool and buying coloring material for the yarn. Time and space forbid that I should more than mention the costly furniture, the splendid musical instruments, the fine carriages, sleighs and harnesses that illustrate a class of expenses which custom proclaims necessary to present farm life. While it may be neither desirable nor practicable for the young farmer to go back to the frugal habits and simple life of his father, it is the height of folly to let fashion dictate expenditures of the class above mentioned beyond what assured income warrants. Enjoyment of life does not necessarily depend on these things. The universal testimony of successful and wealthy farmers who have become such through years of toil and strict economy is that they enjoyed life as well during that period as subsequently when living in fine houses and in a far more expensive way. Farmers, as a class, are quite as well situated to enjoy life as the average of those engaged in other occupations, and their numbers are such that when perfect combination is secured, their rights will be protected and they will be able to reap the full benefit of their toil. Meanwhile, by attending to his business carefully, by breeding and keeping improved stock, by adopting the best methods of cultivation, and practicing strict economy, the farmer may retain his home and add something to his capital each year. But the farmer who spends his time shouting that "farmin' don't pay," that farms are all mortgaged, that farming land is not worth anything, in short, that agricultural bankruptcy is impending over the whole country, will probably succeed in making himself quite unhappy and bringing about still further reduction in the value of his property.

NOTES FOR CHEESE MAKERS.

By JAS. W. ROBERTSON, Dairy Commissioner.

CHEESE FACTORIES AND THEIR SURROUNDINGS.

1. *The present*, not next week, will be the best time to see that all the drainage facilities of the factory are adequate and in good working order.
2. Whey runs, spouts and tanks should be put into such order that leaking will be prevented.
3. If there be a leakage anywhere from floors, spouts or tanks, which is not immediately preventable, provision should be made at once for the drainage of the waste, if only by shallow open trenches. A liberal supply of lime and gypsum should be spread around such places. Don't fail to secure a barrel or two of each, for use during the hot weather.
4. If the factory buildings are not painted and will not be painted, get them whitewashed this month. If you cannot get that done by the proprietors or managers, get permission and do the rest yourself. A whitewashed curing room of imperfect construction can be kept 10 degrees cooler in summer than one not whitewashed. If the cheese become injured, through excess of heat, neither the buyers nor the patrons will whitewash your reputation then, whether the blame belongs to you or not.
5. Make the surroundings of the factory neat and tidy. Plant a few trees and a great many flowers.
6. While keeping the outside of the premises as creditable to your taste and neat habits as possible, make the inside to reflect still more your aversion to everything untidy and dirty. Give every part of the factory a thorough cleaning and keep it in a sweet state all summer.
7. Before the curing room contains any cheese, fumigate it by burning some sulphur mixed in alcohol. That will help to prevent the growth of mould on the outside of the cheese.
8. The leisure hours of May, before the large flow of milk is received, should be employed putting all the apparatus, appliances, utensils and machinery into the best of working order.
9. Be sure that the making room floor is so well constructed and supported that it will not shake or vibrate during the coagulation of the milk.