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Vol. III.

DETROIT, MICH., OCTOBER 15, 1892.

No. 10.



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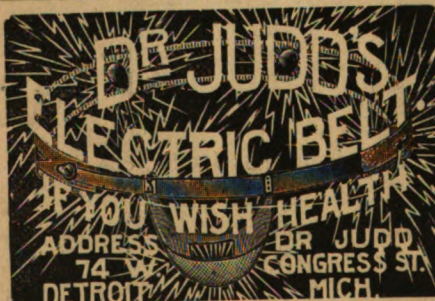
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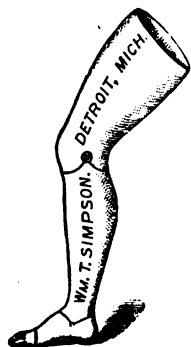
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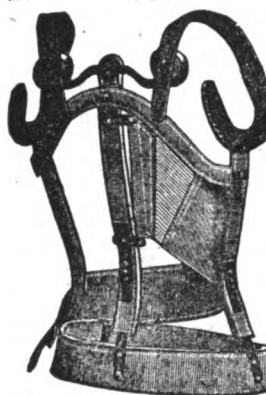
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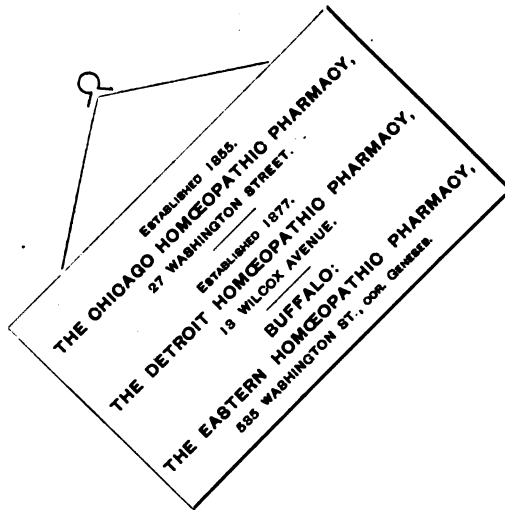
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— THE —

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Published Monthly in the Interests of The Grace Hospital and Training School.

Entered at the Detroit Postoffice as second-class matter.

Vol. III. No. 10.

DETROIT, MICH., OCTOBER 15, 1892.

50 cents Per Year.
Single Copies, 5 Cent

IN our next number we shall be able to give our readers the plans of THE COMPASS for the coming year. At present, we can only say that great improvements are under consideration, and that our journalistic standard will be a high one. In the meantime we wish to call attention to the fact that persons subscribing now will receive the remaining numbers of this year *free*. The subscription price will remain at the present low figure, viz., fifty cents.

WE used to hear a great deal about arsenical wall-papers, and the reports of poisoning from this source were very numerous, until a few years ago. Nowadays, one never hears of such things. The fact is, wall-papers have undergone a great reformation. As long ago as 1870 and down to 1880 specimens of paper were analyzed and found to contain as high as forty-five grains or more of arsenious acid to the square yard, chiefly in green colors, but in an extended investigation of modern wall-papers recently made and reported in the *Lancet*, it was found that arsenical colors had virtually disappeared from them. A few papers were found that contained arsenic, but even in these it was generally an accidental impurity, and in no case did the amount rise to anything like a dangerous figure. Although these results were obtained with English papers, it is very probable that our own wall-papers would be found upon examination to be equally free. This happy state of things is simply the result of a diligent protest on the part of the medical public against arsenical abuse. It is questionable whether the morality of manufacturers has yet reached so high a level that any large number of them would voluntarily give up the use of arsenical greens if they happened to be cheap.

IT is now believed that there may be over a hundred different kinds of micro-organisms in the mouth, and although the idea may not be comforting, we are not well able to escape the fact. Some of these organisms are of material help in the process of digestion; others are quite useless and inoffensive, while a small class are full of very bad possibilities. The bacilli of pneumonia, tuberculosis and syphilis are not to be passed over lightly, especially when they are in the mouth. If these germs are there, it is evident that they may be easily transmitted from one person to another not only by means of eating and drinking utensils, and the practice of kissing, but also by means of dentists' instruments. In reality, this is a very potent source of possible infection. Our own toothaches have carried us at various times into the hands of many different dentists, and most of them good ones, but we do not remember one of them who seemed to make any pretense of practicing dentistry antiseptically. It is not at all comforting to have a dental mirror which you suspect is dirty, thrust into your mouth without any apparent signs of disinfection, and yet this is constantly done by large numbers of dentists. We believe that nowadays, dental colleges are teaching something of antiseptic operations. Perhaps the younger generation is not open to the criticisms we have made. Certainly the older generation is, and it is time to reform. Dental instruments are so easily cleaned by immersion in boiling water, and appropriate sterilizers are to be found at any instrument-makers shop, so that there are only three excuses for neglect in this matter: indifference, indolence, or ignorance. "You pays your money and you takes your choice."

THE FAMINE IN INDIA.

THE attention of the whole world is directed to the terrible famine in Russia, consequently it is not generally known that a similar scourge is afflicting India. In this country all the horrors which follow in the wake of starvation occur with fearful regularity every fifteen years, or twice in every generation. The last great famine was in 1876, and it was estimated by the government that 5,000,000 (five million) persons died of starvation and the two diseases that go with it—dysentery and famine fever.

The cycle is completed again. Owing to a partial failure of rains, the fearful calamity of another famine was threatened a year ago. This year the rains have entirely failed; however, the famine is not yet at its height, for there are districts here and there where a slender harvest is possible, which for a few weeks will ameliorate the condition of the people who live in these favored parts. When this small supply of grain is exhausted, the famine, which is already very serious, will grip the whole nation in its withering hand, and there is no hope or help from within their borders until the next rains, nearly a year hence.

No one who has not seen and felt the awful desolation can realize into what a fearful condition a country is plunged by famine. No rain, crops scorched by the intense heat; tanks whose supply of water has been depended upon for irrigation, empty, and their beds baking in the blazing sun; all vegetation withered, and rivers and wells dry, the scarcity of food increasing, the price of grain rapidly rising; the people, with their gaunt, emaciated bodies, flocking by the hundreds and thousands to the relief camps established by the British government. All this misery and suffering because the blessed rain has been withheld. In many places fodder for cattle is unattainable, and the people are tearing thatches from buildings to feed the famishing animals.

In other localities cattle are being killed in great numbers, as their owners are unable to feed them. Also thousands and thousands have died and are dying from starvation. Every effort is made to keep a certain number alive, which must be done at all hazards, for plowing when the next seeding time comes.

How the people are to maintain themselves until the next annual rains is a most serious question, and will doubtless be answered in usual way—a large part of the population will be supported by the government at the famine camps. There will be a bare existence of many others, and the death of thousands and even millions of people. The better class will have enough to eat, as they will import grain at enormous prices from other countries.

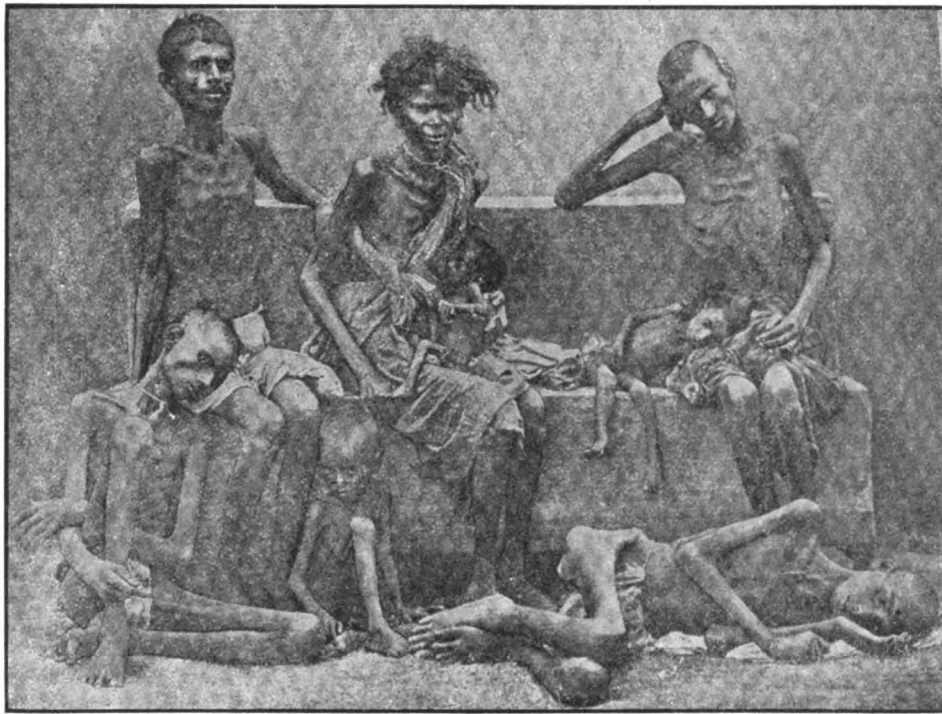
But the matter of food is not the only problem connected with existence. The question of water becomes a pressing one, and is more serious from the wretched religious caste customs; a high-caste man will not drink from a well if a low-caste man has lowered his water pail into it, and so defiled its contents. This really affects the low-caste man, because he is driven away and not allowed to come near these wells, and his own, being more shallow, have become dry. In this emergency the government comes forward, and as a part of the relief work offers to loan money for the digging of wells. The people avail themselves of this offer, and just now there are being dug in one presidency upward of 19,000 (nineteen thousand) wells from loans so made by government. This money is loaned on thirty years' time, with interest at three per cent per annum, and often without sufficient security, but is done to relieve the distress of this ill-fated nation.

With all that the English government are doing to alleviate the horrors of the famine, there is much unnecessary suffering, which arises from the peculiarities of the people, particularly the higher castes. For a caste man to eat or drink anything which has been touched by one not of his caste is so degrading that he would rather suffer death. This is a religious matter with him, and there is no doubt but multitudes die because they will not accept food at government relief camps

or famine kitchens. Many others of not so high caste hold out for a while, then come and partake of the wholesome food. This is too much for their weakened condition, their stomachs refuse to digest it, dysentery results, and in a few days they die.

The one disease accompanying a famine and causing more deaths than either dysentery or actual starvation is famine fever. It is a late attendant, appearing when the people are emaciated and weak, and for it there is no remedy, and the other remedies have no effect on it. When once begun, it becomes

on leave are summoned; relief works are begun. These consists of building new roads, canals, etc., and are designed to help those who are able to work. During a famine many such public improvements are constructed which the government would not otherwise afford. For those who are not able to work by reason of their reduced strength, debility, or age, a form of relief is established known as the famine kitchens. There meals are cooked and given away to all who come. For those who are unable to walk, camps are provided; they are generally



widespread. The weak and ill-nourished who have resisted other influences, and but for this might have lived until the next rains, fall easy victims. It is during this period that deaths are so numerous. The dead lie by the roadside in great numbers; the dying crawl off into the jungles and are eaten by wild animals.

All that a government could do for a famine-stricken country, the English government does for India at these sore times, and deserves much praise for the energetic measures taken. Leave on furlough to all officers of government is forbidden. Those absent

located near a kitchen, and are a refuge for thousands. These relief works, famine camps and kitchens are to be found every few miles all over India while a famine lasts. But although the government deals thus energetically with the problem, and grants every alleviation in its power for the distressed country, the suffering and loss of life is extreme.—*Frank Van Allen, in Leonard's Illustrated Medical Journal.*

We are indebted to the publishers of *Leonard's Illustrated Medical Journal* for the loan of the striking picture illustrating this article, and we wish to express our obligation for the favor.

MEDICAL AND SURGICAL.

ADVANCES IN ASEPTIC SURGERY.

We will not go back to the time when the subject of wounds and fever were inseparable; the time when healing without inflammation was unknown, and wound suppuration appeared as the *natural* reaction of the injured organism.

Pirogoff wrote that "all effort of the physician and surrounding circumstance were of no avail, and that the results of an operation are dependent entirely upon fate."

The hospitals which twenty years ago numbered gangrene among the most frequent and disastrous complications of wounds, now never present a case for the observation of the student, and the majority of the younger surgeons scarcely know this disease.

The gravest operations now run a favorable course. "Fate" and "mishap" are terms no longer permissible. For the occurrence of suppuration the operator is directly accountable. The future of the patient rests in *his* hands.

We operate in youth and in the aged with the same assurance of a favorable result as that entertained in the robust adult of middle years. The abdomen and the cranium are opened without hesitation, and the visceral contents palpated or incised. We no longer believe that in a carcinomatous or tubercular patient a fresh wound is going to heal other than it would in a healthy individual. The theory of a *diathesis* predisposing to wound inflammation is a thing of the past.

For this enormous transition in surgical science, we are indebted to illumination of the dark cloud suspended for so long a time over wound infection—to the revelation that in *living micro-organisms* rests the danger.

To Hunter belongs the original observation that subcutaneous wounds and simple fractures are unattended by suppuration; Lister

comes *later* with the announcement that germs are the cause of infection, but claims that the infection takes place through the atmosphere. Only as *dry dust* do germs get into the atmosphere. From moist surfaces they cannot arise.

The principal circumstances under which bacteria are found in the air, are first, in winds and other forms of violent agitation of the atmosphere; secondly, in rooms after sweeping, and in enclosed compartments with defective ventilation and bad hygienic surroundings; and finally, they are present in the air of densely populated cities.

Here we may find bacilli and micrococci, in numbers varying from a few to many thousands per cb. cm.; while in the free open air, principally molds and spores are present in limited numbers.

In mid-ocean atmosphere there are no germs present. Of this fact I convinced myself in a recent transatlantic voyage.

While still in the Shelda River and English Channel, and again on nearing Sandy Hook and sailing into New York Bay, occasional isolated colonies developed on exposed agar plates. In mid-ocean, between 5 and 40 degrees W. longitude, no germs at all were present in the atmosphere. This was also true of the air blowing from the iceberged Newfoundland Banks. In the staterooms and in the first and second cabins of the steamer, on the other hand, many bacteria were found on short exposures, especially in the halls after dining hours.

In the steerage, where there were 1,100 emigrants packed together in filth, many thousand bacilli and micrococci came to luxuriant development on agar plates and in the large gelatine tubes.

The reverse of dryness, diffused daylight and sunshine, nature's anti-microbic resources are all present in close packed compartments,

like the rooms of a tenement house and the steerage.

Moist air never contains anything like the number of germs which are present in a dry moving atmosphere. This factor, second to the absence of the prolific source, organic material, accounts for there not being any germs in the sea air and in the air of mountain tops. They are held down, in the one instance by the sea water, in the other by the snow covering the mountain peaks.

As evidence of the effect which stirring up the air has on its bacterial contents, Hesse found that the 3,000 germs to the cb. cm. present ordinarily in a school room, increased to 20,000 during the sessions, and to 40,000 when the pupils were marching out of the room.

Petri found the air of crowded stables to contain 30,000 bacilli and 7,400 mold spores to the cb. cm. Very extensive has been the belief, both in medicine and with the laity, that the exhaled breath may contain infection.

But Tyndall demonstrated that the air expired almost never contains germs. Strauss found that in bacteria-enriched atmosphere, in hospital wards, of 600 germs inhaled, but very few were exhaled.

Cadeac and Malet conducted the expired breath of sheep, affected with anthrax and chicken-pox, through troughs $\frac{1}{4}$ to 3 meters long, having healthy animals inhale it; but notwithstanding repeated efforts, in no instance could the non-affected animals, placed at different distances along the trough, be made per inhalation to contract the disease.

The lungs do not give up germs from their moist alveolar surfaces. On the contrary, they filter out the microbes and purify the air bacteriologically, as well as with reference to carbon dioxide.

Only through the sputum or expectorated tissue particles, or through mucus secretion, can disease be communicated from the respiratory apparatus. As Strauss states, the respiratory function must tend to dimin-

ish the bacteria in an overcrowded auditorium. It may be a source of gratification to a lecturer to know that each listener brings with him a filter in the functions of his respiratory apparatus. With every breath about 500 cb. cm. of air is freed of its bacteria.

The more our knowledge of bacteriology has been extended, the less have become our fears of infection taking place through the air, and relatively unimportant is such possibility as compared with the dangers of direct contact of infectious materials.

Supposing a cubic meter of air does contain 1,000 to 20,000 germs, what is this, as compared with the half million to the cb. cm. present in river water, or the million or more contained in a single drop of pus or other highly contaminated fluid?

Repeated examinations in the von Bergmann clinic have shown that the number of germs which precipitate over an area of a quarter of a decimeter in thirty minutes of time, during the clinic hour, was at most but sixty to seventy, and as for pathogenic bacteria ever being present, it was an extreme rarity. Practical experience has long since demonstrated that the air is comparatively harmless, as regards its capability of infecting wounds.

It is the infection through contact which most engages our attention. To make practical application of the finding of germs, the first in surgical importance to us, is their presence on the surface of the body. Eberth, in 1875, first discovered that all imaginable forms of bacteria are found in normal perspiration.

We have on the skin all the factors conducive to the development of bacteria. Uniform temperature; moisture afforded by the excretion of the glands, and a culture medium is formed by the decomposed epidermis. The axillary space, interdigital folds and the hairy scalp, seem to be fertile soil for every possible form of microbe life. Miller found several varieties in the mouth.

Throughout the alimentary canal, in the female genital tract to the os internum, in the male urethra, in the upper respiratory passages, in the conjunctival secretion, and in the cerumen of the auditory canal, masses of bacteria are found. With the occurrence of a slight catarrhal process, the germs at once multiply with striking rapidity and number millions in a short time.

The cleansing of the surface of the body and the removal of the promiscuous forms of bacteria, many of which are pathogenic, constitutes the first requirement in asepsis. Not merely the skin of the patient in the region to be operated upon must be cleansed, but the still more infectious source, the hands of the surgeon. This disinfection is not an easy matter. The fat and dirt filling up the pores and epidermal folds in the skin contain a substratum rich in bacteria. A transitory submersion in the strongest sublimate solution has little influence. The fluid rolls in drops off the fat, glistening skin, without even thoroughly moistening it. In the skin and under the nails, the number of the bacteria remain practically unaltered after such a "would-be-disinfection."

Of course the absolute demand for a most careful cleansing of the surface needs no further argument. The method to be used may be formulated as follows: First, washing with soap and water as hot as can be borne, for one minute. Second, rubbing and drying the surface with sterile gauze. Third, one minute application of 80 per cent. alcohol. Fourth, washing with sublimate solution. Ether in addition may be used where there is an unusual amount of dirt to be removed. The razor is most valuable over parts even not especially hairy, as it removes the superficial epidermal hairs, in which the bacteria aggregate. It cannot be applied so extensively to the scalp, but even here, the area should be shaved from 2 to 5 cm. from the margin of the wound.

An aseptic cleansing of the mucous mem-

branes is less easily effected. Steffee found that irrigation of the vagina with a liter solution 1 to 1,000 bichloride had not the slightest influence in reducing the number of bacteria. A stronger solution would of course be dangerous. Erosions and acute catarrh, or a general intoxication, might result from absorption. A mechanical cleansing of the rectal, vaginal and oral mucous membrane is to some extent practicable, by means of tepid sterilized water and gauze, or a physiological solution of common salt. The stomach is also permissible of free irrigation. Operations in emergency upon the intestine should be preceded by a preparatory course of catharsis.

All the articles and materials used in the disinfection of the surfaces cutaneous and mucous, must, of course, *themselves* be aseptic. The alcohol, ether and turpentine oil, only by careful handling are kept free from bacteria.

Eiselberg showed in 1877, that *soap* may be very richly impregnated with microorganisms, and only that which has been boiled in the process of its manufacture should be used.

Most danger of all and the thing to which the least attention has been given are the *nail brushes*, used in removing blood, pus, surface epithelium and all forms of contamination, they naturally become more or less contaminated themselves; being moist, they retain most of the albuminous matter and form a most excellent nidus for germs. Schimmelbusch and Spielhagen in repeated examinations of the nail brushes, in clinics, dissecting rooms and laboratories found in them inestimable myriads of bacteria. That the brushes therefore, merit some attention must be conceded. Brushes in the von Bergmann clinic, are dealt with in the following manner: Before being used, they are first, sterilized in steam for 30 minutes; second, they are kept continually submerged in $\frac{10}{100}$ [sic] corrosive sublimate. Third, after a

special contamination, they are placed in very hot and finally in boiling water. In every commode should be placed an especially constructed enamel receptacle in which the brush can be continuously submerged in corrosive sublimate. The latter will maintain asepsis by preventing the development of bacteria after the brush has been sterilized in boiling water or steam.

Next in order the instruments themselves, will engage our attention. The impracticability of disinfecting them sufficiently, by means of antiseptic solutions is now clearly proven. The instruments must be sterilized and the choice of method lies between hot air, steam and boiling water. Only the latter of these, will we consider. Spores of many bacilli resist hot air at 140° C. for two hours, and steam for forty minutes to one hour. While boiling in soda insures *absolute death* of even anthrax, in three minutes. A special apparatus devised by Schimmelbusch, for this method of sterilizing instruments, together with other sterilizing apparatuses, will presently be demonstrated.

The especially commendable feature about this German sterilizer, is its economy of time; and if an instrument happens to drop during an operation, and one that cannot be well dispensed with, we are not obliged to wait for 40 minutes, while it is being sterilized. The instrument is at once thrown into the boiling soda, continually provided in the clinic by the above sterilizer, and in three to five minutes it is taken out aseptic.

Special stress should be laid upon the mechanical cleansing of instruments, as well as all things to be rendered aseptic. Pus, blood and masses of fat, the favorite niduses of organisms, must rigidly be dealt with, by washing with water, soap and brush, before they are put into the boiling soda. After use, they should be carefully dried with alcohol and dry sterile gauze. But with this method there is not the liability of rusting which follows dry heat and steam. Further

the instruments are not corroded as with carbolic solution and sublimate. Solutions which even applied *concentrated* do not insure asepsis.

In the construction of the instruments, simplicity should not be lost sight of. All ornamentations and unnecessary fixings of every kind, are contra-indicated on grounds of asepsis. The one piece of steel, may enter into the formation of both the blade and handle, or the latter may be detachable. Instruments made of aluminium, lose one-ninth of their weight, by simply boiling for five minutes. Therefore this material is not to be employed.

Next of interest to us, are the *dressings* to be used; the first quality they should possess is the capability of rapid absorption. Second, they should not contain any bacteria. Third, they should work antiseptically in preventing decomposition of the secretions which they absorb.

Not the dressing which absorbs its maximum at once, and then becomes packed, and remains wet, but material which takes up the secretions gradually, as they are produced and dries out by evaporation, form the ideal dressing. *Sterility* the second prerequisite is absolute and applies to anything which is to come in contact with pure fresh wounds. Both Schlange and Loeffler, have found factory gauze and bandages to contain many germs. The necessity of sterilizing the dressings, therefore, follows as a natural consequence. Steam in this instance, is the most efficient means at our disposal.

Schimmelbusch has invented an ingenious apparatus, which may be used for the combined purpose of an instrument and dressing sterilizer. The steam which has been generated in the boiling soda, is utilized in a chamber placed above for sterilizing the dressings. This combination answers admirably the requirements of the private practitioner. But for the more extensive usages of hospitals and amphitheatres, a

special sterilizer for dressings is necessary. Then the Schimmelbusch apparatus recommends itself, or the Arnold steam sterilizer may be used.

The third requirement in dressings, is an antiseptic property. The prevention of the development of germs in the secretions of the wound which serves only too well, the purpose of culture medium, being the indication to be met. I desire here to lay special stress upon the subject of dry dressing, as it is not in accordance with the usual ideas of wound treatment, as practiced by most surgeons. The more our experimental knowledge has been extended, the firmer has been the position gained by *dryness*, as a condition contrary to a germ development.

There is no remedy so harmless, simple and efficacious in preventing changes in the wound secretion, as dryness occurring of itself by evaporation. Moisture is the essential dependence of bacterial life. Dryness, on the other hand, is the germ's greatest enemy. Let the most favorable nutrient of bacteria, *moissure*, be dispensed with and the organisms cease to grow. Let then the absorption and drying out of the blood, pus and wound secretion be provided for, and the development of germs is *prevented*.

We are indebted to the Esmarch school, especially to Neuber and Gamgee, for having placed the importance of dry dressings in their present advanced position. Schlange in the von Bergmann Clinic, demonstrated by exacted bacterial experiments, how promptly dryness works against every form of germ life. Layers of sterile, gauze wire saturated with bouillon and the upper surface impregnated with the green pus bacillus, then the gauze was placed in open glass plates; and evaporation and dryness took place, and only a very scanty development of the bacteria became perceptible. A logical consequence, and one exactly in accordance with organic life development in any form. Moisture is essential to growth. Instead of leaving the

plates open, others of the same series were closed and evaporation of the moisture prevented. The pus formers now proliferated with enormous rapidity and soon formed a greenish film over the entire surface of the gauze. This suggests the practical advantage of facilitating to every possible extent, evaporations of the secretions from the wound.

First, the proper dressing material must be selected. Secondly, the evaporation must not be interfered with, by the interlaying of impervious material as oil silk, or gutta percha tissue. The latter are of no special advantage, they prevent the wound and dressings from drying out, cause retention of the secretions, prohibiting even perspiration from the surface and inducing in the course of a few hours, the development of offensive odors, and very non aseptic conditions.

* * * * *

In sublimated gauze after a time, only an insignificant trace of the original antiseptic is to be found. The simple *dry treatment* of wounds, then, is the present position of surgical science, and is reinforced on all sides by logic and rational experience and results.

No oiled silk to promote retention of secretions, no chemicals to irritate the wound, no irrigation to carry germs into it, no pus. Only in two instances is anything additional to the simple dry sterile gauze needed. One is in the case of thick tenacious purulent discharge. The other is the tamponing of cavities, and the latter indication is admirably met in the iodoform dressing. Non-irritating and non-toxic (in reasonable quantity,) it prevents changes in the absorbed secretions. Notwithstanding the repeated attacks made upon it, iodoform retains its place as prominently as ever as our most reliable dressing. —Frank J. Thornbury, M. D., in *The Dietetic and Hygienic Gazette*.

HOSPITAL ITEMS.

REPORT FOR SEPTEMBER.

THERE were treated during the month of September 139 cases; of this number 45 were free cases to whom were furnished 528 days of treatment. There were 36 visits to the dispensary; of this number 22 were new cases. The ambulance made 44 runs, bringing in 23 patients and taking home 15. The expenses for the month were \$3,537 61 and the earning were \$1,979 85. The monthly income from the endowment is \$1,500, leaving a deficiency of \$57.76.

DONATIONS FOR SEPTEMBER.

Mrs. E. S. Barbour, lumber for bookcase and 2 baskets grapes, watermelons; Mrs. H. A. Newland, 4 baskets pears; Ladies Committee, 1 floor brush; Mrs. H. C. Colburn, 1 bushel tomatoes; Mrs. M. B. Mills, 1 pair plush curtains, 1 peice silk for pillows, 1 peice velvet, 1/2 doz. fancy tray cloths; Miss E. Kirby, 1 basket grapes, 1 game pres. flops, 1 com, tray set, china and 3 cups and saucers, 1 sugar bowl, 6 butter chips, 1 cream pitcher, 1 tea pot, 1/2 doz. silver knives and forks; Mrs. Harold Wilson, magazines; Mrs. W. Smith, books; Miss H. E. Johnson, 1 picture; Simons & Cooper 2 Kumyss; Mrs. Papplestone, jurymast.

OPERATIONS FOR SEPTEMBER.

A	BCESS of Groin.....	2
"	" Pelvis	1
A	MPUTATION of foot.....	1
"	" of leg.....	1
"	" of fingers	5
C	IRCUMCISION.....	1
C	URETTING Cervix	2
"	" Ulcers	3
D	ILATATION of Cervix	3
"	" of Urethra	1
E	YE, evisceration.....	2
E	XPLORATORY INCISION for supposed carcinoma of kidney.....	1

FISTULA IN ANO.....	1
IMPERFORATE VAGNIA (opened).....	1
OVARIOTOMY (double)	2
PERINÆORRHAPHY	7
TUMOR (lipomata).....	1
WOUNDS—Incised wound of hand	1
Lacerated wound of hand.....	1

A series of entertainments is in preparation for the benefit of the hospital. Mrs. E. M. Lyon 28 Davenport St., would like the names of all friends of the hospital who would be interested in such entertainments.

Dr. and Mrs. R. H. Stevens have returned from California, and have opened an office at 57 High St. West.

Dr. and Mrs. O. Leseure have returned from a trip of several months abroad.

Miss Hibbard has returned from England and has resumed her position as principal of the training school.

Dr. R. C. Rudy has returned from the West and resumed practice.

Dr. T. H. Oliver was thrown from his buggy a short time ago and severely injured. He is rapidly improving, however, and will soon be able to resume his work.

GUM CHEWING.

IS gum chewing harmful? In the first place let us inquire to use the saliva of the mouth should be put. Nature has given us a pair of parotid glands that are capable of furnishing us about three pints of saliva per day. This saliva is calculated to convert the starchy portions of our food into dextrin, while being masticated before entering the stomach.

The saliva will flow just as freely while chewing gum as it will while masticating our food. Now, suppose we chew gum for one, two or three hours before a meal, what condition are the glands in to furnish fluid to digest starch and lubricate the passage to the

stomach? By that time the glands are completely tired out and exhausted, and wholly incapable of doing any more work until rested, and the result is the food must enter the stomach without having the starch changed at all, and it must remain starch until it passes through the stomach into the duodenum, as the gastric fluid of the stomach will not act on starch. Fermentation will set in much more easily, and the stomach becomes sour under more slight provocation than it would if we had not chewed the gum, and the glands had been able to do the work nature designed them to do.

Suppose we should do something to drain away the gastric fluid of the stomach so that when the the food enters there is nothing to act upon the nitrogenous portions (which are digested in the stomach), how long would it be before abused nature would cry out in the form of pain in that organ?

I believe that gum chewing is rewarded in much the same way, only, perhaps, in a less degree, and is the cause of many of the sour stomachs, pinched faces and irritable dispositions we so often meet in the practice of medicine. The writer was once a gum chewer and a dyspeptic, and had all the symptoms that go with such habits. Now I am not a gum chewer, have not the dyspepsia, and enjoy good health, and desire that others should enjoy the same.

Yes, gum chewing is harmful.—*William F. Hubbard in The Health Exponent.*

ANCIENT ANTISEPSIS.

IT is taken for granted that the idea of boiling water before using it is as a beverage is of relatively recent date.

A manuscript, however, has just been discovered in the Khedive's library, at Cairo, which corrects this false impression. This manuscript treats of hygiene in Egypt, and is the work of a celebrated Arabian physician, Ebn-Radouanel-Maszy. It bears the date of the year 460 of the hegira (1068).

In this manuscript it is said "that the best method of setting water free from principles injurious to health consists in first submitting it to the action of heat, by boiling it, then exposing it to the coolness of the night-air, decanting it, boiling it a second time, clarifying it by mingling chalk with it, and, finally, filtering it through a porous jar exposed to the night-air."

Water which has been thus treated, says the Egyptian physician, is ready for drinking.—*Times and Register.*

FUNERAL REFORMS.

THE *Lancet* states that the fashion of standing bareheaded at funerals seems to be losing ground. The death of the young Duke of Clarence and of many others of only a little less prominence than he in England, caused by funeral exposures in midwinter, has attracted attention, "and what is better, has kept it there," to the need of new customs regarding the interment of the dead. The editorial writer in the *Lancet* further remarks that, if the reform takes good root and grows, he hopes that its influence will not be limited to cold weather, for it is no less injurious to many men to be compelled to expose their bared heads to the broiling sun in summer than for certain others to throw down the gauntlet to frost and snow storm. In the English climate and that of our own northern sections there are not many months in the course of the year when it is safe for the male citizen to go about bareheaded, and it is none too early for the agitation of some sanitary protection to men's heads at funerals all the year through. We remember to have seen lately a narration to tee effect that a lady, then recently widened, sent a written request, on her own behalf and on that of her sons, to certain friends invited to the funeral of her late husband, that they would not remove their head-covering during the open air part of the funeral observances. This was in midwinter no doubt, but the lady's example might well be followed at any time of the year.

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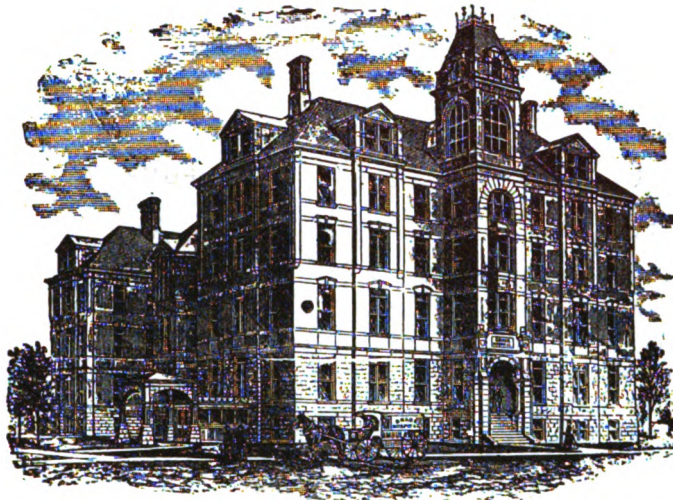
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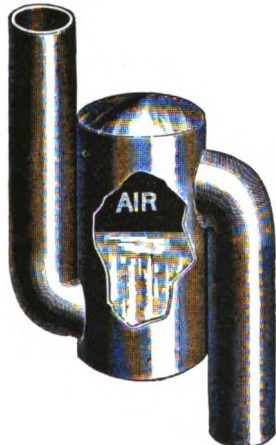
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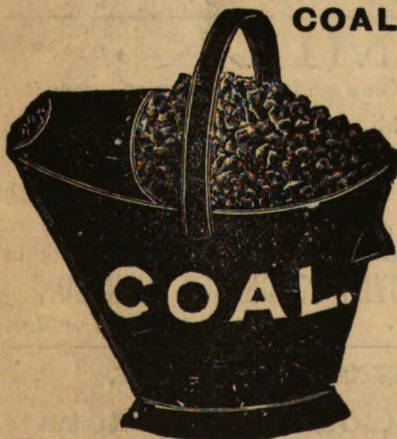
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