

THE OFFICIAL ORGAN OF

The Canadian Hospital Association
The Alberta Hospital Association
The British Columbia Hospital Association

\$3.00
PER
ANNUM

50 C
PER
COPY



THE HOSPITAL WORLD

Vol. XIX

Toronto, April, 1921

No. 4

CONTENTS

EDITORIALS

| | Page |
|-------------------------------------|------|
| Public Health Nursing, Toronto..... | 109 |
| Manager—Actor | 114 |

ORIGINAL COMMUNICATIONS

| | |
|---|-----|
| The Hospital as a Public Utility. By J. H. W. Bower.... | 116 |
| Canadian Hospital Construction..... | 129 |

"In all infectious diseases, in all chronic anæmic and asthenic conditions, the mineral content of the Organism becomes impaired." (Prof. ALBERT ROBIN of PARIS)

Fellows' Compound Syrup of the Hypophosphites

The Standard Mineralizing Tonic

combines the nutritive action of the Chemical Foods: Calcium, Sodium, Potassium, Iron, Manganese, and Phosphorus, with the dynamic properties of Quinine and Strychnine

Literature and Samples sent upon request

FELLOWS MEDICAL MANUFACTURING CO., Inc.
26 Christopher Street New York City



LISTERINE

A Non-Poisonous, Unirritating Antiseptic Solution

Agreeable and satisfactory alike to the Patient, the Physician, the Surgeon and the Nurse. Listerine has a wide field of usefulness, and its unvarying quality assures like results under like conditions.

As a wash and dressing for wounds

As a deodorizing antiseptic lotion

As a mouth-wash, gargle, spray or douche

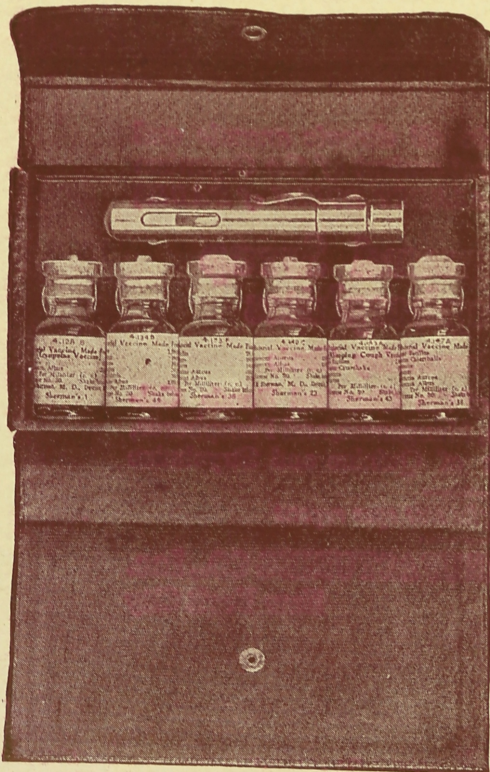
Operative and accidental wounds heal rapidly under the antiseptic protection of Listerine, as it does not destroy tissue cells or retard the natural processes of repair.

In all cases of fever, where the patient suffers so much from a parched condition of the mouth, a few teaspoonfuls of Listerine in a glass of water provides a refreshing and effective mouth-wash.

Lambert Pharmacal Company

2101 Locust Street - SAINT LOUIS, MO., U.S.A.

66 Gerrard St. East, Toronto, Ont.



Sherman's Vaccine Case

The best immunizing response in Pneumonia is obtained during the first twenty-four hours after the initial chill. Every hour being vitally important, successful immunologists make inoculations in Respiratory Infections at their first call.

Be prepared; carry an assortment of Sherman's Polyvalent Vaccines and self-sterilizing syringe in this convenient case.

Your dealer will be pleased to supply you

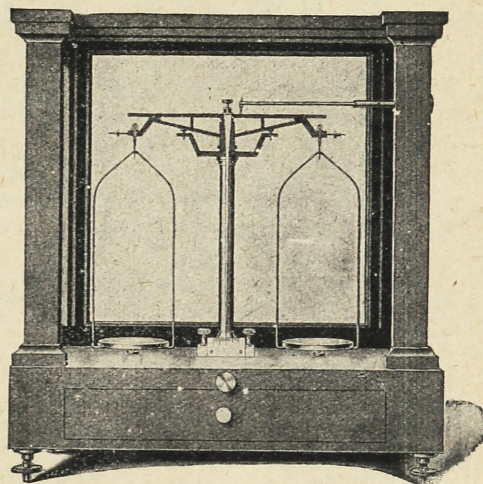
G. H. Sherman, M.D.
 Detroit - Michigan

Largest Producer of Stock and Autogenous Vaccines

LABORATORY EQUIPMENT

IS your hospital equipped with an up-to-date Laboratory?

Write us for our catalogue of all Laboratory supplies, including Balances, Centrifuges, Colorimeters, Incubators, Microscopes, Microtomes, etc.



The J. F. HARTZ CO.
Limited
TORONTO - CANADA

ADJUSTABLE Double Slip Socket Leg

We are the only Canadian Patent Holders of the above. Guaranteed not to chafe.

The Canadian Government, after two years' trial of Single Socket, adopted the Double Slip Socket for below the knees amputations. Our Sockets, being adjustable, they can be made larger or smaller by the wearer, and are guaranteed for three years against defects in workmanship or material.

We are also manufacturers of Perfection Hands and Arms. Also guaranteed.

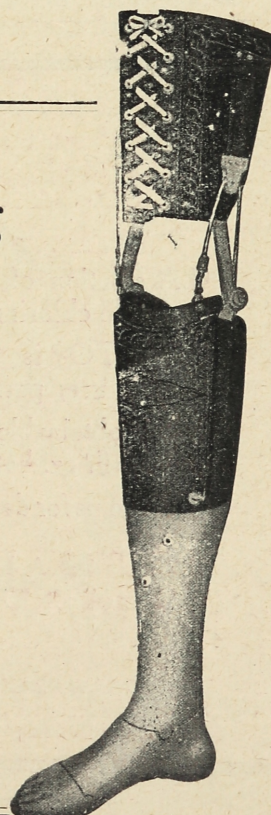
We repair all makes of limbs by expert workmen in a prompt manner.

A full stock of Crutches, Trusses and Accessories on hand. Write or telephone for catalogue. Call at our factory for a practical demonstration.

UNDER NEW MANAGEMENT

Dominion Artificial Limb Co., Limited
 259 COLLEGE ST., TORONTO, ONT.

Telephone College 3226



Hospital Superintendents

should instruct their Nurses and Domestics to use

GILLETT'S LYE

for disinfecting sinks, closets and drains. It is also ideal for the cleansing of urinals and bed pans—in fact any vessel that requires disinfecting. Gillett's Lye should always be used for scrubbing hospital bath tubs and operating room floors.

For cleansing and disinfecting, dissolve one teaspoonful of Gillett's Lye in two gallons of water.



BWARE OF IMITATIONS

E. W. Gillett Co. Ltd.

TORONTO, CANADA

Winnipeg

Montreal



Fecto

- ☐ A solution of hypochlorites and chlorine containing 4% of available chlorine.
- ☐ FECTO is the ideal Germicide and Disinfectant for general use, particularly in Homes and Hospitals.
- ☐ It is obtainable through druggists, and supplied in 4 fl. oz. and 16 fl. oz. bottles, as well as in 1 and 5 gallon containers.
- ☐ Write us for descriptive literature giving full directions for use.

PARKE, DAVIS & CO.

WALKERVILLE, ONT.

MONTREAL BRANCH
45 St. Alexander St.
Read Building

WINNIPEG DEPOT
301 Keewayden Building

TORONTO OFFICE
422 Ryrie Building

When writing advertisers, please mention The Hospital World.

The First Reason Why Glaxo is "The Super Milk" is THE COW

Glaxo is, of course, an entirely British product, but its ever-increasing success during the last twelve years as a builder of bonnie babies is, to no inconsiderable extent, due to its country of origin—New Zealand—where dairy science and hygiene have reached a standard unequalled anywhere else in the world.

Cows in New Zealand live in the open air and feed upon growing grass all the year round. Therefore, they are not apt to

be affected by tuberculosis, and their milk contains a maximum of the growth-promoting factors or vitamins. The danger of tuberculous milk is further guarded against by a strict system of Government control supplemented, in the case of Glaxo, by our own independent inspectors: That the potency of the vitamins is not impaired by the Glaxo Process has been conclusively proved by experimental demonstration and by years of clinical experience in all parts of the world.



STANDARDISED DRIED MILK

for Infants, Invalids, the Aged and General Household Use

GLAXO (Medical Dept.) 155 GREAT PORTLAND STREET, LONDON, W. 1

Proprietors: Joseph Nathan & Co., Ltd., London and New Zealand

Sole Agents for Canada:

HAROLD F. RITCHIE & CO., Limited, 10 McCaul Street, Toronto

SANITARY BRUSHES

DOCTOR,

We take pride in calling your attention to our Sanitary Brushes. Every bristle is set in steel wire that is galvanized, preventing rust and holding the bristles firmly. Our brushes are not affected by heat, a fact that physicians and hospitals will appreciate. No institution can make a mistake in sending us a trial order.

CANADIAN BRUSH COMPANY
 Rear No. 7 McCaul Street : TORONTO
 Phone "Adelaide 3497"

CELLUCOTTON

TRADE MARK COPYRIGHTED

Manufactured by Kimberly-Clark Co., Neenah, Wis.

"HEREAFTER PLEASE BRING CELLUCOTTON FOR USE IN HEAVY DRAINAGE CASES"—The Surgeon.

The surgeon uses Cellucotton because it is an *efficient* material; the Superintendent buys it because it is *economical*.

Send for samples and prices: you will find them worthy of your consideration.

Exclusive Selling Agents

Lewis Manufacturing Co.

Walpole, Mass., U.S.A.

New York
 Cleveland

Philadelphia
 Kansas City

Chicago
 San Francisco

When writing advertisers, please mention The Hospital World.

The Big Job—

To develop a Hospital Pad that was

1. Adequate in size.
2. Superior in materials.
3. Convenient in form.
4. Really absorbent.
5. Easy to handle and sterilize.
6. And INEXPENSIVE.

The

Curity

Hospital Pad

is the finest pad that can be made for hospital use.

Saves making in your own institution.

A large six-pad sample will be sent you without charge if you will return this coupon.

Lewis Manufacturing Co.,
Walpole, Mass.

I'd like to receive the large six-pad sample of Curity Hospital Pads. I am Superintendent of the

..... Hospital

Address

Your Name

PLUTO

WATER MAKES NOR HAS MADE ANY EXTRAVAGANT CLAIMS AS TO WHAT IT HAS DONE OR WILL DO.

THE GOOD WILL AND FAITH OF THE MEDICAL PROFESSION WAS AND IS RETAINED ON TRUTHFUL CLAIMS.

MANY PRACTITIONERS DIRECT PATIENTS TO THE SPRINGS FOR COMPLETE TREATMENT.



French Lick Springs
Hotel Co.

French Lick, Indiana

HOME OF PLUTO

Dessert for Hospital and Home Menus

Junket is a whole-milk food, delicious, mildly sweet and extremely easy to digest because of pre-coagulation.

Junket

MADE with MILK

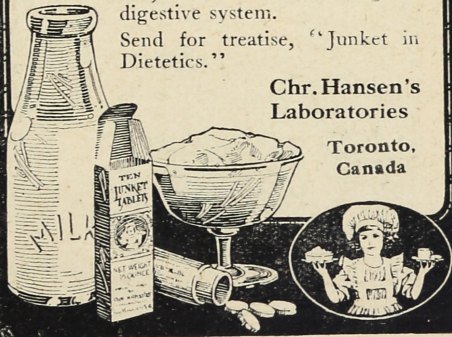
As a valuable food in the hospital it has no superior.

As a home dessert, it is often recommended because it fulfills the dessert desire, without overburdening the digestive system.

Send for treatise, "Junket in Dietetics."

Chr. Hansen's
Laboratories

Toronto,
Canada



It's a Question

Is there anything more important than the proper handling of your foodstuffs?

Investigate

CLEAN SANITARY EFFICIENT ECONOMICAL
MECHANICAL REFRIGERATION

The following are some of those who **have** investigated and **installed** refrigerating plants:

| | | |
|--------------------------------------|---------------------------------|--|
| Royal Victoria Hospital, Montreal | Children's Home, Winnipeg | General Hospital, Sault Ste. Marie |
| Toronto General Hospital, Toronto | St. Michael's Hospital, Toronto | Mountain Sanatorium, Hamilton |
| City Hospital, Hamilton | Soeurs de la Charite, Quebec | Camp Hill Military Convalescent Hospital, Halifax, N.S. |
| | Byron Sanatorium, London | |

CONSULT US

CANADIAN ICE MACHINE CO. LTD.

CALGARY WINNIPEG TORONTO MONTREAL

92% OF THE HOSPITALS

WHO FAVOR US WITH THEIR PATRONAGE, BUY

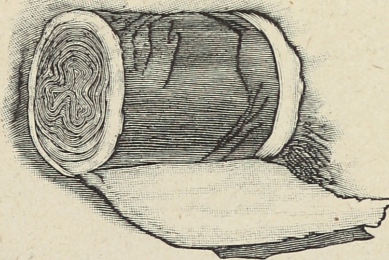
"ABSORBON"

The Low-Priced Absorbent Cotton of Quality

in preference to other brands, because it is better value at the price than any other brand on this market.

Guaranteed pure, sterile—passes through the same 50 different operations as our higher grades—sells for less because made from short staple cotton which costs less than long fibre cotton though quality is identical.

Investigate—A postcard brings samples and prices to your desk.

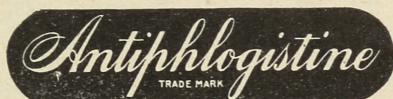


Maplewood Mills

Largest Manufacturers in the World
1296 Stafford Road, Fall River, Mass.

FANNING THE FLAME TO PUT OUT THE FIRE

"Fanning the Flame" is exactly what is being done when ice packs are used in treating pneumonia. Cold applications to the chest will drive the blood from the superficial circulation to an already congested and engorged lung.



applied warm and thick over the entire thoracic wall, relieves the congestion by increasing the superficial circulation. The cutaneous reflexes are stimulated, causing contraction of the deep-seated blood vessels. The overworked heart is relieved from an excessive blood pressure, pain and dyspnoea are lessened, the elimination of toxins is hastened and the temperature declines.

Send for "The Pneumonic Lung" booklet.

THE DENVER CHEMICAL MFG. COMPANY, MONTREAL

Protein Milk Powder (C.M.P.)

**Corrects Intestinal
Disorders in Infants
and Children**

Feeding tests, conducted at the Hospital for Sick Children, Toronto, have demonstrated the value of Protein Milk Powder (C.M.P.) These tests covered many months and showed that, as a corrective food for infants and children in cases of intestinal disorders, etc., Protein Milk Powder (C.M.P.) was as effective as the liquid Protein Milk prepared by laboratory methods.

Send to our nearest office for directions for its use. No directions are printed on the labels and mothers therefore must use it under medical supervision. Protein Milk Powder (C.M.P.) is supplied direct by us and is sold by selected druggists.

**Protein Milk
Department**

**CANADIAN MILK PRODUCTS
Limited**

TORONTO

WINNIPEG MONTREAL ST. JOHN



**THE STANDARD
SALINE LAXATIVE**

Samples on request

Bristol-Myers Co.
New York



When writing advertisers, please mention The Hospital World.

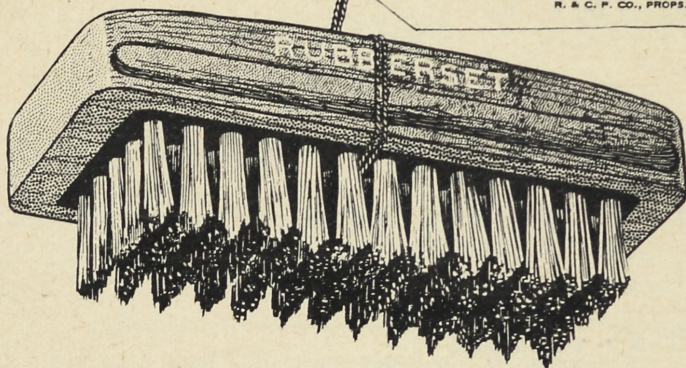
The Finest Nail Brush ever made for Hospital use

GUARANTEE

This sanitary brush is absolutely guaranteed to be superior to any Nail Brush made. It will stand years of the hardest usage in hot or cold water; it can be STERILIZED regularly without the least injury. Dealers should enthusiastically recommend them because Rubberset Brushes MUST make good or WE will.

RUBBERSET COMPANY

R. & C. P. CO., PROPS.



THE handle of this brush is of Circassian Walnut, the only wood which is impervious to and unaffected by water or chemicals. Consequently, this brush can be boiled indefinitely, ridding it of any germs, without in any way affecting it. "Every bristle is gripped everlastingly in hard rubber." They

cannot possibly come out or work loose. This brush will give constant service—so while its initial cost is higher than ordinary brushes, it is by far the most economical. For hospitals, institutions or for private use, it is the most economical nail brush ever devised and made.

**Be sure that it bears the mark of the genuine
"RUBBERSET"**

This brush is covered by our iron-clad guarantee—"Rubberset must make good—or we will."

If your dealer has not this brush in stock, please write direct to the factory. We will see that your requirements are filled.

We also make brushes of every size and shape—all manufactured under the original and genuine "Rubberset" process. Be sure that the brush you buy is marked "Rubberset"—covered by our complete and unalterable guarantee.

RUBBERSET COMPANY, LTD.

Factories: TORONTO AND GRAVENHURST, CANADA

Try a Lifebuoy Bath Yourself, Doctor

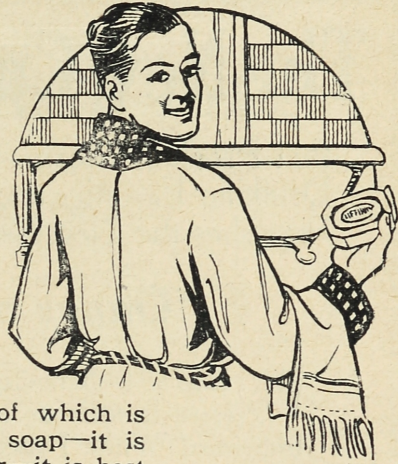
See if its cleanly odour—its creamy, velvety lather and the healing of its antiseptic vegetable oils do not have a wonderful tonic effect.

LIFEBUOY HEALTH SOAP

Is made from materials the purity of which is beyond question. It is more than soap—it is antiseptic and germicidal in character—it is best for the bath, at any age—it is par excellence the soap for washing all garments that touch the skin and for all housework.

Grocers and Stores everywhere sell it

Lever Brothers Limited, Toronto



Easifirst

The economical Shortening that will raise your baking and cooking to the highest point of perfection.

Get a trial carton with your next order.

GUNNS LIMITED
West Toronto, Ont.

We can make
Special Forms

exactly duplicating any hand.

Can put name on any gloves so that it will not sterilize off.

Insure to your own use the gloves you pay for



Specialists in the Manufacture of
Seamless Rubber Goods
Of Every Description

The Only Makers of
Seamless Rubber Gloves
in Canada

Sterling Rubber Co., Limited
GUELPH

The New Cup

that Provides Clean
Drinking Facilities and
Furnishes the Necessary

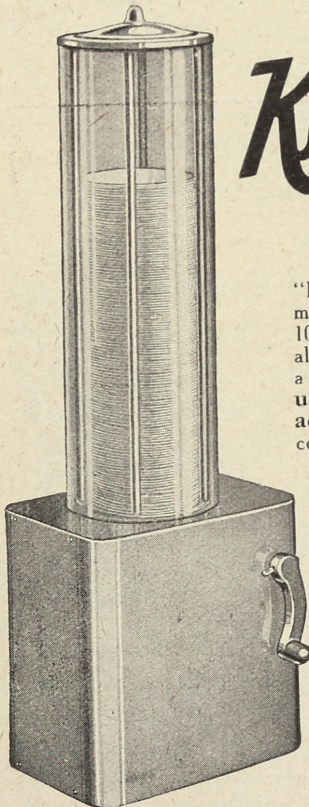
"Cups of



Cleanliness"

"Ounce of Prevention"

IN Hospitals, Schools, Churches, Clubs, Public and Private Institutions of all kinds—the new "Konex" Individual White Paper Cups and Dispensing Service offers an efficient, economical and practical method of preventing disease, by affording clean, safe water-drinking facilities at minimum cost.



White Metal and Aluminum
"Konex" Dispensing
Machine.

Konex

Paper Drinking Cups

with

Dispensing Machine and Soiled Cup Container

"Konex" Cups are cone shaped—made by automatic machinery from pure, white, unwaxed paper—and are 100% hygienic, because the dust-proof white metal and aluminum dispenser protects and delivers them one at a time, as needed, "Konex" Cups are absolutely untouched by hand until the moment they are actually used for drinking purposes. Being cone-shaped each cup falls on its side after use and is discarded. This means a clean cup for every person and eliminates entirely the contaminating dangers of the common drinking glass.

The new "Konex" Service will meet the unhesitating approval of the medical profession because of its efficacy, its simplicity, its health-protective features. Highly recommended for all public and private institutions—easily installed—inexpensive to maintain. Cups cost only about $\frac{1}{4}$ cent each.

Descriptive literature gladly sent
free on receipt of postcard or
telephone enquiry—Adelaide 4062.

"Vortex" Division

Canadian Wm. A. Rogers Limited

570 King Street West, Toronto

Recent Analysis of
Franco American Ether
 by the University of Toronto showed the following:

| | |
|------------------------|------|
| Specific Gravity | .718 |
| Residue on evaporation | None |
| Ethyl Peroxide | None |
| Aldehydes | None |
| Sulphur Compounds | None |
| Acetone | None |
| Water | None |
| Acidity | None |
| Odor on evaporation | None |

All other samples of Ether examined were shown to contain impurities.

When ordering specify F. A. Brand, an absolutely pure Ether at a moderate price.

Manufactured by
FRANCO AMERICAN CHEMICAL WORKS
 Carlstadt, N.J.

J. A. MacDONALD, Phm. B. Chief Chemist, Toronto General Hospital
 Canadian Representative
 ALL ORDERS RECEIVE PROMPT ATTENTION

It's So Full of Cleansing Action

The first time you use it you will realize that Minty's adds zest to the joy of living. It seems so full of punch and vigor that you know it has done its work well.

Minty's Tooth Paste

is the proved 100 per cent. mouth antiseptic that cleans the teeth and sterilizes the mouth and brush.

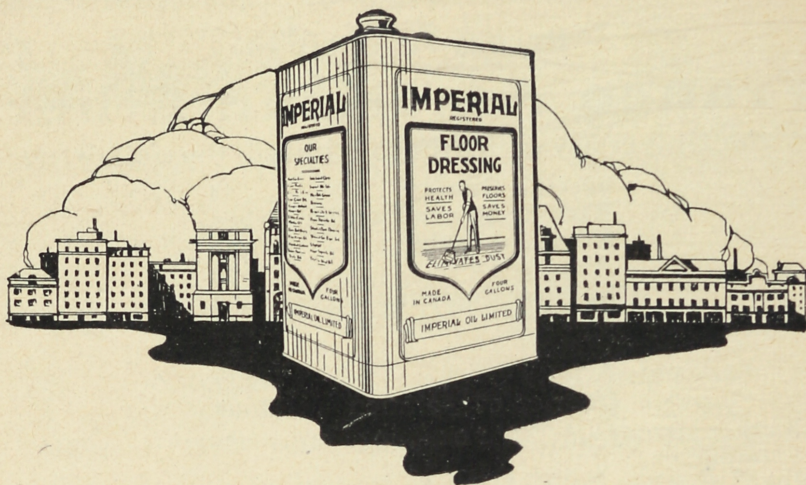
Its pleasant, refreshing taste and remarkable lasting effect exhilarates the senses with a feeling of wholesome cleanliness.

The first tube you use will prove its worth.

PALMERS LIMITED . MONTREAL



When writing advertisers, please mention The Hospital World.



Modern Sanitation

Dust is germ-laden and unhealthful. Ordinary methods of dusting and sweeping only disturb it and cause it to settle elsewhere. Where such conditions prevail, dust becomes a serious menace to health.

90% of this objectionable, atmospheric dust can be captured and held by the use of Imperial Floor Dressing. And regular sweeping with a stiff broom removes *all* of it.

IMPERIAL
FLOOR
DRESSING

Imperial Floor Dressing spreads evenly and economically. One gallon treats upwards of 700 square feet, and a single application will last for several weeks.

Imperial Floor Dressing is non-evaporating and non-gumming. It preserves floors, prevents dust from

rising and adds a brighter note to hospital furnishings. Write to the nearest Imperial Oil Branch for a demonstration

Imperial Floor Dressing is sold by good dealers everywhere in one and four-gallon lithographed sealed cans; also in half-barrels and barrels.

IMPERIAL OIL LIMITED

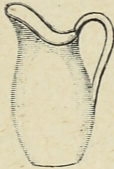
Power - Heat - Light - Lubrication

BRANCHES IN ALL CITIES

When writing advertisers, please mention The Hospital World.

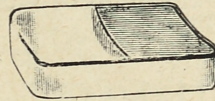
BETZ QUALITY PRODUCTS

A few articles of white enameled ware and rubber goods attractively priced for hospitals



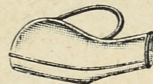
2HW 1595. WATER PITCHER

- 1 quart **\$1.50** Doz. **\$16.00**
Weight, 18 oz.
- 2 quart **\$1.80** Doz. **\$18.50**
Weight, 20 oz.
- 3 quart **\$2.10** Doz. **\$22.50**
Weight, 24 oz.
- 4 quart **\$2.75** Doz. **\$30.00**
Weight, 32 oz.
- 6 quart **\$3.00** Doz. **\$33.00**
Weight, 40 oz.



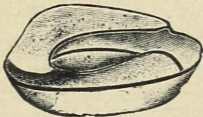
2HW 1610. DOUCHE PAN.

White. Each **\$2.25**.. Doz. **\$20.00**...3 doz. **\$54.00**
Weight, 3½ lbs.



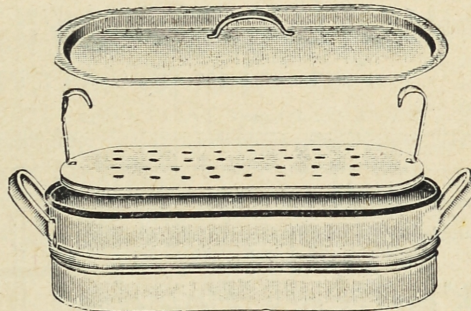
2HW 1645. MALE URINAL

White. Each.....**\$1.55** Per Doz.....**\$15.50**
Per gross **\$146.50**
Weight, 1 lb.



2HW 1635. SUPERIOR BED PAN

White enamel No. 4.....Each **\$4.25**
Doz. **\$48.00**.....3 doz. **\$138.75**



2HW 1660. WHITE ENAMELED STERILIZER

16x7x5 Each.....**\$7.00**
18x7x5 Each.....**\$8.00**

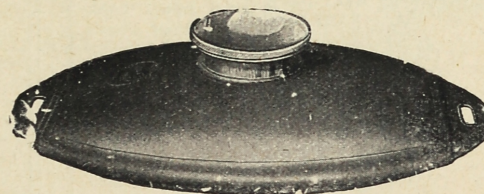


2HW 7808. HEAVY RED RUBBER HOT WATER BOTTLE

Molded in one piece. Full capacity.

2 quart. Each....**\$1.60**. Doz.....**\$15.50**

Buy them by the Dozen



2HW 7611. ICE CAP

Seamless, very heavy, with loops on each side for tying.

Each.....**\$0.90** Doz.....**\$8.50**
Weight, 8 oz.

FRANK S. BETZ CO.

Retail:
CHICAGO

30 E. Randolph Street

Wholesale and Mail Order Depts.
HAMMOND, IND.

U. S. A.

Retail:
NEW YORK

6-8 W. 48th Street

HOSPITAL PLUMBING

The attention of Hospital Superintendents is called to our

Sanitary Hospital Fixtures

We carry a full stock of these fixtures and are in a position to submit prices on request.

Our goods are the finest that are obtainable, and have been installed in some of the most modern Hospital Buildings throughout the Dominion.

PURDY MANSELL, LIMITED
63 ALBERT STREET, TORONTO

Insects **can** be exterminated in all public buildings and they **should** be

Keating's Powder



—the old reliable Insecticide—should be kept on hand for this purpose. In basements, dormitories, and every nook and corner where insects might gain a headway, use Keating's liberally and eliminate danger from this source. Harmless to human or animal life, but sure death to

Flies, Fleas, Mosquitoes, Ants, Wasps, Beetles, Bugs, Cockroaches, Moths.

Made by **THOMAS KEATING, London, England**
Established 1788

SOLE AGENTS FOR CANADA
Harold F. Ritchie & Co., Limited
10 McCaul Street, TORONTO, ONT.

GOUT!

TO COMBAT AND
RELIEVE ATTACKS
OF GOUT

No other medicine gives such prompt, so marked, and so permanent relief as

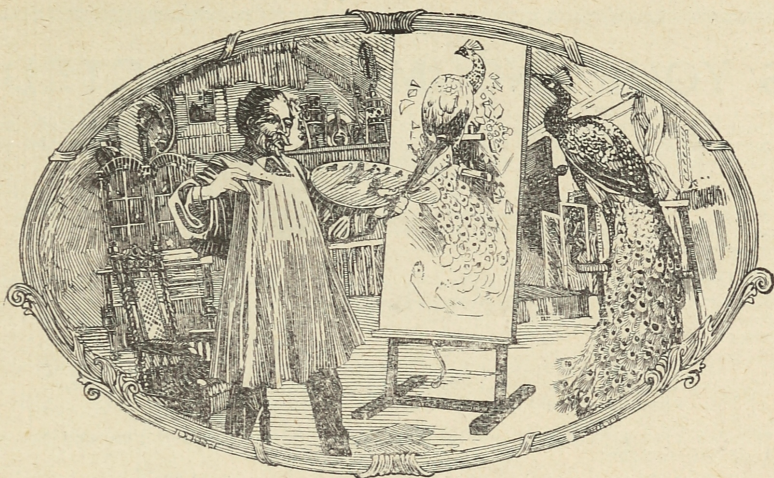
Vin d'Anduran

The only anti-gout medicine that has remained a genuine medication.

J. Mousnier, Sceaux

Sole Distributor for Canada

ROUGIER FRERES
63 Notre Dame St. East
MONTREAL



Eminent Painters Design Our Boxes

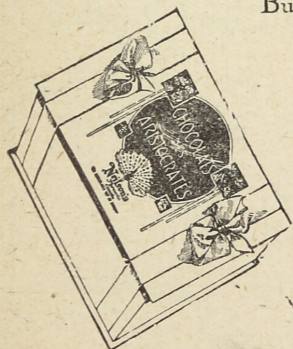
WHY? Because we believe their appearance should reflect the quality of their contents. And their contents are a triumph of the confectioner's art.

After a design is perfected, no detail is neglected to make the box an artistic triumph.

The shaping of the corners, the colour and tie of the ribbon, everything is made to harmonize.

As a result, the Gift of a Box of Neilson's is always a joy to the eye and to the palate.

Buy to-night—a Box of Neilson's Chocolats des Aristocrates



Neilson's

"The Chocolates that are Different"

When writing advertisers, please mention The Hospital World.

IS YOUR INCOME PROTECTED?

Does your earning power cease if you are laid up through an accident or a sickness? Are your efforts rewarded if you cannot afford to pay for the protection that is so essential to all professional men?

For \$70.00 per annum, we can give you \$7,500.00 in case of death by accident; \$25.00 per week in case of any sickness or accident; also \$25.00 per week towards hospital expenses, and, further, an additional \$25.00 per week for nursing expenses.

For \$226.50 a year, we can give you \$1,000.00 in case of death by accident; \$100.00 per week in case of sickness; \$100.00 per week in case of accident; \$100.00 per week towards hospital expenses, and \$25.00 per week towards nursing expenses.

All the above figures will double in case of an accident while travelling in any public conveyance, such as an elevator, etc., or when in a burning building.

We can also give you a straight accident policy covering you against any kind of an accident.

The above are but a few of the coverings outlined to give you an idea that we can *write a policy to suit our clients*.

Our protection can be obtained from any reliable insurance broker or by writing direct to our Montreal or Toronto Office, the addresses being as follows:

J. H. FERGUSON, Esq., Superintendent, Royal Indemnity Company
Toronto Office: 27 Wellington Street East

R. J. BOND, Esq., Superintendent, Royal Indemnity Company
Montreal Office: 2 Place D'Armes

Important Announcement

WE HAVE ESTABLISHED A TORONTO SERVICE STORE AT
557 YONGE STREET, Corner Wellesley

See our Cord Tires and Stanco Cord Tubes
ON DISPLAY THERE

We realize the importance of tire service for doctor's cars and specialize in this work.

Test our service and you will become a regular customer.

THE UNITED RUBBER COMPANY LIMITED
Factory: 1189 Bathurst Street, Toronto

The Hospital World

TORONTO, CANADA

A Journal published in the interests of Hospitals, Sanatoria, Asylums
and Public Charitable Institutions throughout the British Empire

Vol. XIX.

TORONTO, APRIL, 1921

No. 4

Editorials

PUBLIC HEALTH NURSING, TORONTO

ORIGIN.

IN 1907, at the request of the Toronto General Hospital, the first public health nurse for Toronto was appointed. Her work was exclusively among the tubercular. Shortly afterward St. Michael's Hospital secured a nurse for similar work. A branch for Child Welfare was established later. School nursing, which had been established in 1910, under the Board of Education, was taken over by the Department of Public Health in 1917.

STAFF AND DUTIES.

The Nursing Division of the Department of Public Health is under a director, who is responsible to the Medical Health Officer. The city is divided into

seven districts, with a superintendent in charge of each. There are about 100 nurses employed; and their work consists in school and district work. In the school the aim is to do both preventive and educative work. Their preventive work consists in the examination of all children absent two days or more, before admission to the classroom; fortnightly or monthly inspection of all classes and exclusion of suspect cases for diagnosis; they make provision for the correction of defects of vision, hearing, dental work, and attention generally to bodily ailments detrimental to the proper carrying on of studies. The educative aspect of the nurses' work consists in classroom talks on personal cleanliness and care of the body generally; proper diet; exercise; fresh air. Instruction is given to junior fourth girls in home and personal hygiene, care of the baby, with demonstrations of bathing and feeding.

Public health nurses also seek to enlist the aid of charitable organizations to supplement the work of the Public Health Department.

DISTRICT WORK.

Pre-natal Work.—The nurses visit the prospective mother, and urge her to keep in constant touch with her physician or a hospital clinic, at the same time instructing her as to the care of herself in respect to diet, cleanliness and rest and exercise.

Infant and Child Welfare Work.—Visits are made to the home of every new-born baby, and, where necessary, instructions are given the mother

how to care for it. Nurses attend child welfare clinics, to which the mothers are invited. Inspections are made of homes where babies are boarded, and also of maternity homes. Visits are also made to children who are absent from school on account of illness; and interesting parents in the correction of their children's defects.

Hospital Follow-up Work.—Visits are made to patients referred to the nurses by doctors conducting hospital clinics, through our hospital social service nurse. Necessary treatments which have been ordered are given. Patients are instructed in the correct way of taking treatments. Reports as to the patients' progress are made to the doctor. Visits are made to homes where a member of the family has been admitted to the Isolation Hospital; and instruction given regarding the detection of early symptoms of the disease which may appear in other members of the family.

Tuberculosis Work.—Visits are made to patients who have been discharged from sanitariums, and to those who have not had sanitarium treatment. They are instructed in the care of themselves and how to prevent infecting others. They also impress upon these patients the importance of keeping in touch with the hospital clinics or with their own doctor.

Social Work.—Where nurses discover families in need or distress of any sort through sickness or poverty, they make a report of the same to the Neigh-

borhood Workers' Association, which body takes steps to relieve the same.

Miscellaneous.—Investigations are made of complaints respecting improper housing, defects of plumbing, etc., and conditions reported to the proper division of the Department. Inspections are made of families previous to leaving for summer camps; ascertaining conditions for relief societies or associations; giving treatments at the request of the family physician when it is impracticable for patient to go to doctor for treatment or employ a private nurse or go to hospital.

Contagion.—In cases of suspected contagious diseases, visits are made to the family before sending a doctor to diagnose.

Epidemics.—Should there be outbreaks of influenza, smallpox, etc., public health nurses render what assistance they can.

Civic Employees.—Public health nurses are notified of the absence of all civic employees. Visits are made and reports sent, whether such absence is due to illness or not.

WORK OF SPECIAL SUPERVISORS.

There are six special supervisors.

1. *Infant Welfare.*—This supervisor organizes clinics in different districts of the city for pre-natal and infant welfare work; and attends such clinics at the Children's Hospital.

2. *Psychiatric*.—This nurse attends the psychiatric clinic, and does the follow-up work.

3. *School*.—This supervisor visits all schools—public and separate—and arranges work of school nurse.

4. *Venereal*.—This supervisor attends and supervises venereal disease clinics and does follow-up work.

5. *Hospital Extension Work*.—This supervisor is the Director of Nurse Education for the Department; supervises clinics of all the hospitals, except that of the Hospital for Sick Children.

6. *Tuberculosis*.—This nurse organizes and supervises tuberculosis work.

Maternity Homes.—This is under supervisor of Infant Welfare. This supervisor inspects all homes where babies are boarded or where mothers are confined, to ascertain if they are being properly conducted.

Students are sent from six of the Training Schools for Nurses in the city for a two months' experience in the work of the public health nurses.

RELATION TO OTHER DEPARTMENTS.

The work of the Public Health Nursing Division is related to that of certain other divisions of the Department. Records and statistics records are kept of all cases, active or inactive, which the Department has had to do with, and placed in their proper category. The Division of Communicable

Disease and Quarantine reports to the Nursing Division all cases of communicable diseases in school children. Nurses report back to this Division premises ready for fumigation, where that is advisable. Nurses frequently supply the Laboratory Division with specimens of sputum, urine, etc. From the laboratory are received the results of analyses and examinations.

—PHOEBE DODY, P.N.

MANAGER—ACTOR

MR. H. WYNN, manager of the Western Hospital, Montreal, is an amateur actor of long standing, and ranks as a "star" in the Community Players Club of that city. In one of Lord Dunsany's most successful one-act plays recently given by the Club, Mr. Wynn took the role of a deceased burglar who storms the gate of Valhalla by the aid of a "jimmy," and gains entrance.

A successful hospital manager is up against equally difficult official problems every day.

Mr. Wynn's fellow-workers will understand the reason of his realistic impersonation.

The Hospital World

(Incorporating The Journal of Preventive Medicine and Sociology)

Toronto, Canada

A Journal published in the interests of Hospitals, Sanatoria, Asylums and Public Charitable Institutions throughout the British Empire

Editors :

JOHN N. E. BROWN, M.B. (Tor.), Ex-Sec'y American and Canadian Hospital Associations. Former Supt., Toronto General and Detroit General Hospitals.

W. A. YOUNG, M.D., L.R.C.P. (London, Eng.), Toronto, Ont. Consultant, Toronto Hospital for Incurables.

ALEXANDER MacKAY, M.D., Inspector of Hospitals, Province of Ontario, Former Chief Medical Officer, Board of Education, Toronto.

Associate Editors :

Ontario

C. J. C. O. HASTINGS, M.D., Medical Health Officer, City of Toronto.

N. A. POWELL, M.D., C.M., Senior Assistant Surgeon-in-charge, Shields' Emergency Hospital, Toronto.

P. H. BRYCE, M.D., Chief Medical Officer, Department of the Interior, Ottawa.

HERBERT A. BRUCE, M.D., F.R.C.S., Founder of Wellesley Hospital, Toronto.

J. H. HOLBROOK, M.B., Physician-in-Chief, Mountain Sanatorium, Hamilton.

C. K. CLARKE, M.D., LL.D., Medical Director of the Canadian National Committee for Mental Hygiene, Toronto.

HELEN MacMURCHY, B.A., M.D., Late Asst.

J. W. S. McCULLOUGH, M.D., Chief Officer of Health for the Province of Ontario, Toronto.

J. H. ELLIOTT, M.D., Asst. Medicine and Clinical Medicine, University of Toronto.

H. A. BOYCE, M.D., Kingston, Ex-Secretary American Hospital Association.

GEORGE D. PORTER, M.D., Toronto, Secretary Canadian Tuberculosis Association.

G. MURRAY FLOCK, M.B., Physician-in-charge, Essex County Sanatorium, Union-on-the-Lake, Kingsville.

C. M. HINCKS, B.A., M.B., Assistant Medical Director of the Canadian National Committee for Mental Hygiene, Toronto.

Inspector of Hospitals, Province of Ontario, Toronto.

Quebec

H. E. WEBSTER, Esq., Superintendent, The Royal Victoria Hospital, Montreal.

A. K. HAYWOOD, M.D., Superintendent, Montreal General Hospital, Montreal.

J. R. BYERS, M.D., Superintendent, Laur-entian Sanitarium, Ste. Agathe des Monta.

Nova Scotia

W. H. HATTLE, Provincial Health Officer, Department of Public Health, Nova Scotia, Halifax.

Manitoba

DAVID A. STEWART, M.D., Medical Superintendent, Manitoba Sanatorium for Consumptives, Ninette.

Alberta

T. H. WHITELOW, B.A., M.B., University of Toronto, Medical Officer of Health, Edmonton.

A. FISHER, M.D., Superintendent, Calgary General Hospital, Calgary.

Saskatchewan

J. G. WRIGHT, M.D., C.M., Regina.
M. R. BOW, M.D., Superintendent, Regina General Hospital, Regina.

British Columbia

ARTHUR G. PRICE, M.D., Medical Health Officer, City of Victoria, Victoria.

M. T. MacEACHERN, M.D., Superintendent, Vancouver General Hospital, Vancouver.

H. C. WRINGH, M.D., Superintendent, Hazelton Hospital, Hazelton.

Great Britain

CONRAD THIES, Esq., late Secretary, Royal Free Hospital, London, England.

DONALD J. MACKINTOSH, M.D., M.V.O., Medical Superintendent, Western Infirmary, Glasgow, Scotland.

United States

CHRISTIAN B. HOLMES, M.D., Cincinnati, Ohio.

MISS MARGARET CONROY, Boston, Mass.
F. C. ENGLISH, M.D., Director of Surveys of Hospitals and Homes for the Aged and Children, Saint Luke's Hospital, Cleveland, Ohio.

THOMAS BEATH, M.D. (late Superintendent, Victoria Hospital, Winnipeg), Raleigh, N.C.

All Communications, Correspondence, and Matter regarding Subscriptions and Advertisements TO BE ADDRESSED TO "THE HOSPITAL WORLD," 145 COLLEGE ST., TORONTO, CANADA.

Reprints, including Half-tones, etc., Supplied Authors at Net Cost.

Original Contributions

THE HOSPITAL AS A PUBLIC UTILITY

By J. H. W. BOWER.

Late General Superintendent, Engineering Branch, D.S.C.R., Hospital Consultant, Department Soldiers' Civil Re-establishment.

ECONOMIC CONSIDERATIONS ON DESIGN AND CONSTRUCTION.

CANADA during the war and post-war days has had, and is still having, many difficult and highly complex situations to face. In the work of "carrying on" during the war period, and during the period of reconstruction, social and industrial conditions have undergone tremendous changes.

The problem of rehabilitating ex-members of the forces in civilian life has perhaps been one of the most complex problems that Canada as a whole has ever faced. The work has received the untiring attention of professional men and laymen in every walk of life. Perhaps from the professional standpoint, the medical science has seen one of its greatest activities and periods of advancement known in history. The wonderful work of the medical man and the surgeon in the theatre of war has been the subject of general comment throughout the world. When sick and wounded men were returned from overseas, this wonderful work of human restoration was continued with equal efficiency in Canada.

It is not the intention here to discuss even in a general way the progress of medicine and surgery during the war and post-war period, but when it is considered that these activities reach such a final conclusion in institutions generally accepted as "temporary affairs," it would seem to follow that Canada's system of war hospitals requires some consideration toward perpetuating some of the ideas followed, in future civilian hospital work.

Practically every community throughout Canada feels the

present need of more hospital accommodation. Those who are responsible for the public welfare in this regard, while realizing the necessity, are loath to promote projects that would meet the situation on account of the enormous increase in constructional and material costs. Even before the war, the erection of hospitals and institutions involved expenditures that invariably raised the tax rate apparently out of all proportion to the facilities afforded. Only our larger cities seem to be able to finance the erection of institutions that would afford the most up-to-date facilities for taking care of the public at large.

One step toward solving the cost of institutional work required is seen in the movement toward the community hospital idea, namely, that of establishing a central institution to serve a number of neighboring municipalities. It is believed that this step is one in the right direction, and if the proper degree of co-operation is maintained, there is no reason why such projects cannot be promoted throughout the length and breadth of the country. To-day with our advanced facilities for transportation, the promotion of the good road movement, and the almost universal use of motor transport, the idea of a community hospital serving a number of municipalities is one which should give many of the desired results.

There is another phase of institutional work which in these days of monolithic structures seems to have been passed unnoticed by those who are most affected. Civilian hospitals erected in pre-war days have generally been of the "monolithic" and multiple storey type, located in down-town sections of municipalities, consequently surrounded by the rush and bustle of everyday life. Canada's war hospitals, which represent an accommodation in the neighborhood of 20,000 beds, have been commented upon most favorably by those in a position to criticize as obtaining all of those features of utility, both from the medical and the administration side, that go to make up a most efficiently working hospital machine. Their locations are, in most instances, somewhat removed from the hurry and scurry of everyday life. In general, their buildings consist of structures only two storeys in height, which of course necessitated the erection of buildings on the unit plan, all being properly related to central administration and operative units.

Canada's type of war hospital was evolved after a most careful consideration had been given to the problem, and the inception of the scheme was largely on account of the necessity of keeping constructional expenditures at the absolute minimum. During the operation of these institutions other considerations have become patent, and it has been found that their operation and general upkeep have been administered with just as much ease, and possibly more economically, than hospitals for civilian purposes erected in pre-war days.

When it is considered by those responsible for the running of these institutions that their maintenance, upkeep, and general patient day costs do not exceed, and are perhaps less than, similar costs in civilian institutions, and when this consideration is coupled with the fact that the capital expenditure involved approximates less than fifty per cent. of what ordinary institutions cost in pre-war days, one is immediately faced with the possibility that here is an object lesson, a careful study of which may lead to the solving of the difficult problem of providing Canada with sufficient institutions to properly meet the needs of its population.

It is true that institutions for civilian work would have to embody certain constructional features that do not pertain to war hospitals, but the general scheme of lay out and storey height of buildings is one which should receive very careful consideration at the hands of the architect who is called upon to make economical expenditure of public funds in the provision of institutions. The following report deals in a general way with the considerations referred to herein, and was presented before a hospital board which has been considering for some time the erection of a hospital. There has been no attempt to go into the matter in great detail, but the writer has endeavored to show that bricks and mortar do not materially furnish aid toward the recovery of the patient, and that injudicious expenditure in this regard is entirely unwarranted. It will be noted also from the report that this trend of thought is being entertained more and more by experts on this continent and in Europe, who have been intimately associated with institutional work.

A hospital is not a luxury; it is an absolute necessity. Such being the case, the public cannot afford to indulge in undue expenditure as to erection and upkeep costs. The problem, therefore, that confronts the designer in dealing with the matter of hospital design is indeed a very difficult one, and he who loses sight of any of the economic phases of the problem and enters into an elaborate and expensive type of construction is certainly failing to fulfil one of his most important functions. Consequently the architect must of necessity not only be the designer of the institution, but he must at the same time assume the position of adviser, in so far as his professional technical qualifications permit. It is impossible for any architect to assume such a position, no matter how well versed he may be in the criteria of hospital design from the standpoint of architecture, unless he has made himself thoroughly conversant and is personally familiar with the many and varied problems that arise in reference to matters of hospital management, the trend of thought of medical experts, and the probable considerations that will arise in the future.

A general hospital is a common utility, and as such should successfully serve the public. Therefore, it is not the excessively poor, or the rich proportion of the population that has to be primarily considered. The poor man who is unable to pay is, or should be, looked after by the State. The rich man is in a position to obtain that for which he is willing to pay. It remains, therefore, for the designer to construct a building at such a cost as to first expenditure and upkeep charges as will permit of the middleman, who is too proud to accept charity and too poor to pay excessive prices, taking such measures as will ensure the continued health of himself and his dependents.

It has been remarked that it is not only the pain and suffering that the average person fears in considering going to a hospital, but it is also the fear that he will be financially embarrassed for a twelvemonth in meeting his bills.

I think that the recent "Flu" epidemic demonstrated to those who actively engaged in gratuitously helping those unfortunates who were affected by the malady that if the majority of the families received proper medical care and attention,

and if their systems were in a properly resistive state, disease and mortality would be considerably reduced. Proper medical attention in the majority of cases cannot be given at the patient's home as effectively as in the hospital; yet the carrying charges of the hospital are so great that the rates for admission and maintenance prohibit general advantage being taken of their facilities, except in extreme emergencies. The standard rates are by no means all the charges made, and it often occurs that the patient is required to pay about thirty cents on every dollar of admission charge for extras such as use of laboratory, anesthetic, operating rooms, etc., etc.

The cost of hospitals built previous to the war was so great that it has been found impossible to reduce the rates to bring their benefits within the reach of the ordinary citizen without running the institutions into excessive debt. This fact is impressed upon us by the repeated requests that are being made for public assistance or government grants. One of the newest hospitals in a prominent city of Canada went in arrears, I believe, last year over sixty thousand dollars. Another, I am given to understand, found the burden of carrying charges so great that the use of two hundred beds of its accommodation have been discontinued, in order that carrying charges might be reduced. The hospitals to which specific reference is made herein are more or less monuments of architectural excellence. Their construction is of the multiple storey type, one of them, I believe, being a modern building about nine storeys high. Wherein lies the impossibility of economically administering such buildings? Is it due to over-staffing? Is it due to an abnormal amount of service rendered to the patients housed there? You will agree, I am sure, that this is not the reason. One of the big reasons is the excessive first cost of construction. If this can be reduced to an economic amount, the problem of economic upkeep is to a large extent settled.

With the enormously increased cost of labor and materials during the war, hospitals constructed to-day will labor under more adverse circumstances as to upkeep costs than those that at present exist. I was advised about three months ago by the chairman of the biggest builders' exchange in Canada that

they considered that building costs have had a minimum increase of fifty per cent. When applied to hospital construction, where special equipment, ventilation, heating systems, etc., are required, this increase in cost will closely approximate sixty to sixty-five per cent. Taking an average of nineteen general hospitals constructed before the war, the average cost ran three thousand dollars per bed. These hospitals constructed to-day, with the increased cost of labor and materials, would cost at least five thousand dollars per bed without furnishings.

In considering a hospital and its functions, we must think of it as a living thing. Its functions and general uses are constantly changing. This must be the case, due to the rapid progress that is constantly being made in the science of medicine and surgery and the advancing methods instituted for the well-being of the public. We have at every hand examples of the rapid progress, inasmuch as hospitals constructed comparatively a few years ago are now obsolete. Does it not seem logical, therefore, that in considering the erection of a hospital, careful thought must be given to future requirements?

Cities and towns throughout the length and breadth of the country are to-day burdened with the upkeep of institutions whose original cost was so excessive that there would be an avalanche of public criticism should those in authority take the necessary steps to have them demolished. Such object lessons surely teach us that in designing a hospital we should build it so that it may be easily altered to meet the ever-advancing requirements.

Buildings of massive steel or reinforced concrete construction, of the multiple storey type, cannot possibly lend themselves to such future alteration. Neither is such type of construction in any way economic as to first cost and carrying charges.

Let us, for a moment, consider the industrial concern, whose main object coupled with first cost is reduction of overhead charges so that they may put their article on the market at the lowest possible cost. Do they construct their buildings of the multiple storey type? No. We see their industrial plants covering acres of ground, the buildings usually being of one or two-storey construction. By this method of procedure, they

at once reduce their capital expenditure, handling charges, fire risk, etc., and, at the same time, when their business grows, or methods of manufacture change, their plant may be readily altered to suit their progressive policy.

This reasoning in a large measure holds in the matter of hospital construction. In the matter of office buildings, and others that require to be in the heart of business activities, the multiple storey type of building is an absolute necessity in order that a maximum amount of floor space may be obtained on a small city lot; but I am sure that no one will contend that the building is economic when considered solely from the standpoint of construction cost. A skyscraper of ten storeys has only one floor of its structure which is economic as to construction, namely, the tenth floor. This floor supports only the roof, and at the same time gives an equal space to the first floor. The first or ground floor, besides supporting its own weight, must support the weight of nine storeys above it, and its four walls surround only the same area as the tenth floor. Reasoning as applied to office building construction may in isolated instances be applied to hospital construction, where it is found absolutely necessary to construct an institution in the heart of a city.

Such reasoning does not, however, hold in the majority of cases, and I think that it is definitely established that the ideal location for a general hospital is one that is removed from the general activities of everyday life, in a location which is naturally beautiful, lying on the outskirts of the city. Such a site will tend toward the well-being of those who will undergo treatment there. Is it not ill-advised to construct a building, on a large plot of ground, of the multiple storey type, when so much park land is available? It would be more logical, I contend, to build buildings of one or two storeys in height where the patient in recuperating from his disability may feel the immediate adjacency of the beautiful surroundings, and not have that feeling of being cooped up on the top floor of a high building similar, in many respects, to a down-town tenement. As authorities see it to-day, the hospital is a building for recuperation, and the patient should be made to feel a pleasant anticipation of what his surrounding will be, rather than feel

that he is going to an institution of a cut-and-dried business-like type, where he will continually long for the day when he is to be returned to his own home.

In review of the foregoing, we may lay down the special considerations that should govern the final adoption of any policy as to hospital construction. These may be enumerated briefly as follows:—

1. First cost.
2. Efficient administration as to medical and surgical requirements.
3. Efficient administration as to upkeep costs.
4. (a) How to make the structural type of the building coincide with its useful life.
(b) How to make the general design and construction of such an elastic nature that it may be extended from time to time at minimum cost, without disrupting the entire administration.
(c) How the institution may be changed or altered to suit the ever-changing requirements that occur, due to the advancing methods in the science of medicine and surgery.

Analyzing these considerations, I would recommend as follows:—

1. The erection of an institution of proper fireproof construction, built along such lines that the initial cost will save the taxpayer easily a third of the amount usually appropriated for such purposes. Consider an institution of, say, 500 beds. The amount of interest on debentures, together with allowance for sinking funds, etc., saved, would provide a yearly sum closely approximating one hundred thousand dollars. This amount wisely expended in improving administrative facilities as to efficient numbers of help, nurses, doctors, etc., would accrue to the direct benefit of the citizens, whereas if it was sunk into elaborate construction, which cannot be avoided in the construction of multiple storey buildings, the return would be nil.

2. As to efficient administration, with respect to medical and surgical requirements, an institution built along the lines herein contemplated would leave nothing to be desired, and Canada's war hospitals have furnished the entire proof in this connection. The relation of one department to the other with proper planning can definitely be arrived at, and the skill of the doctor aided to the largest possible extent. In Canada's war hospitals the latest decisions with respect to clinics, operating suites, X-ray departments, examining rooms, electro-, hydro-, and mechanotherapy departments, etc., etc., and their proper relation to bed accommodation have been made effective.

3. It has been contended that buildings of one or two storeys in height are costly to administer, both from the standpoint of staff and the matter of upkeep charges as to heat, light, power, etc. This is definitely not the case. On the other hand, the matter of general administration will be considerably facilitated. It can be successfully demonstrated that the general lay-out can be so arranged that each department of the hospital, with its full complement of administrative services, will be quite as self-contained as in the multiple storey type of hospital. The matter of extra cost as to heat, light or power, is a negligible factor, and the results obtained in war hospitals built in Canada have conclusively demonstrated this point. Would it not be approaching the ideal to have an institution where transference of patients from one location to another is not interrupted by the necessity of using elevators and stairways? Such a condition has many virtues which need not be further enlarged upon here.

4. The type of design which is contemplated in this report will provide for the extension of any amount which may be properly administered by one institution. In the event of extension, there will be no disrupting of administrative facilities, and while extensions are being made, those housed in the institution will not be annoyed or distracted by the continual traffic through halls and corridors by construction gangs. With the absolute certainty of advance in methods of medicine and surgery, units of the hospital from time to time may be demolished, and new units erected to meet the requirements.

This, similar to the matter of alteration, may be carried out without disrupting the entire institution.

In the foregoing considerations we have not touched upon the question of general appearance. Considering the problem from the purely aesthetic side, which is very often the only point of view from which the architect considers the problem, it is established that an institution built along the lines recommended will leave nothing to be desired. It will be in entire harmony with its surroundings, and have the necessary touch of domestic atmosphere so necessary in an institution of this kind. I venture to say that a multiple storey building could not obtain, in any such degree, these requisites. By adopting a system of multiple ward units, of one storey, or at the most, two storeys in height, every necessity can be fulfilled. Medical men admit to-day that fresh air and sunlight are wonderful aids to their professional skill. They are constantly increasing this form of treatment. The multiple ward unit construction aids the doctor in this matter as no other system of hospital construction could. In order to obtain abundance of fresh air and maximum sunlight, together with beautiful views of the immediate surroundings, the multiple ward unit is the only scheme that will give the maximum desired results.

It may appear to some that the considerations set forth herein are the personal observations of the writer. This is hardly the case. New ideas as to economic hospital construction have been gaining headway both on this continent and in Europe. Dr. Donald J. MacIntosh, M.V.O., M.B., LL.D., F.R.S.E., Medical Superintendent of the Western Infirmary, Glasgow, and Assistant Director of Medical Services, Lowland Divisional Area, in the second edition of his book entitled "Construction, Equipment and Management of a General Hospital," published in 1916, states in part as follows:—

"The problem that confronts an architect in dealing with this type of hospital is how to make the structural life of the building coincide with its useful life. The rapid change of medical opinion as to the methods of treating

disease affects the internal arrangements to a considerable extent. Also the standards of sanitation, heating, lighting, and ventilation, etc., constantly tend to rise. The result is that comparatively modern buildings have fallen out of date though still quite good structurally. In view of these facts, an architect is now required to design a hospital at a minimum of expenditure. As long as he can construct a building that will be weatherproof and comfortable, and can be maintained at a moderate cost during the length of its useful life, he is entitled to reduce the initial cost even at the loss of durability."

When an authority like Dr. MacIntosh takes this view of hospital construction, a man who has been an accepted authority during his entire professional career as to hospital construction, his recommendations must have some weight.

Dr. Joseph Griffiths, C.M.G., M.D., Mag. Chir., F.R.C.S., in his pamphlet entitled "Hospitals, Yesterday, To-day and To-morrow," follows the same reasoning as that advanced by Dr. MacIntosh.

Dr. Griffiths goes even to the extent of saying that the most temporary type of construction can be made to provide the best of facilities for treatment purposes, and recommends the adoption of this type of construction.

In discussing the subject and making some reference to a hospital, the design of which he was instrumental in promoting, Dr. Griffiths states:—

"The main object of a hospital, namely, the provision of conditions, surroundings, and facilities for rapid cure of injured and diseased men, was always kept steadily in view, but money was not spent on unnecessary bricks and mortar, which can in no way whatsoever add to the value of an institution for the restoration to health of the sick and the wounded."

In another portion of his pamphlet he states:—

"The provision of a sufficient number of general hospitals for the people has been uppermost in my mind. Hither-

to, the difficulty encountered has been the erection of a hospital that will serve all purposes, but at a cost that can be met with comparative ease by the people of the locality. Our money is required to pay for skilled labor, whether in the kitchen, in the office, in the wards, or elsewhere, and this we can have, I feel convinced, if those to whom we look for it can first be convinced that the means of cure do not lie in costly buildings. The buildings must, of course, be commodious. They must be arranged to economize labor; they should be well lighted and well ventilated and sufficiently weatherproof to protect the patients from the inclemency of our very changeable climate."

A friend of mine, knowing my interest in the future development of hospitals, has forwarded to me a copy of the Cavendish Lecture delivered before the West London Medical Chirurgical Society on July 4, 1918. The lecturer at this society was Sir Bertrand Dawson, G.C.V.O., C.B., M.D., F.R.C.P., Army Medical Service, Physician-in-Ordinary to H.M. the King, Physician to the London Hospital. As is well known, the meetings of this society are considered of the greatest moment in medical and surgical matters. Sir Bertrand Dawson in the course of his lecture makes specific reference to the urgent necessity of providing ample hospital accommodation for the public, and in order to illustrate his recommendations he says:—

"In this connection let me call attention to a valuable pamphlet, 'Hospitals, Yesterday, To-day and Forever,' by Colonel Joseph Griffiths, of Cambridge."

Sir Bertrand Dawson makes a slight error in the title of Dr. Griffiths' pamphlet, but his entire concurrence in Dr. Griffiths' views is evidenced by his reference to this very able work.

We may refer also to one of our Canadian medical experts, namely, H. E. Young, B.A., M.D., C.M., LL.D., Chief Officer of Health, British Columbia, and President of the Canadian Public Health Association. Dr. Young read a paper before the first annual Convention of the Hospitals of British Columbia, and an abstract of his paper appears in that eminent publi-

cation "The Modern Hospital." This abstract reads in part as follows:—

"It is said that in medicine the best service can only be obtained by millionaires or by the very poor in the cities. The millionaires get it by paying for the services of experts. The very poor get it gratis in the hospitals of our cities which are manned by these same specialists but the great mass of the people are not able to avail themselves of these privileges. At the same time, it is the great mass of the people who, through their taxes, are keeping up our institutions and are paying the cost, and it is beginning to dawn upon every one that they are entitled to an equal service with their fellow-citizens of any class. The idea has germinated that will result in a movement toward establishing hospitals that will be at the service of every one."

The present paper deals only in a general way with the matter of the hospital from the public standpoint. No special endeavour has been made to consider the exact procedure that should be followed, as the solution of the problem is one having many phases too lengthy to be discussed at detail in one article. The discussion, however, appears to lead us to the fact that those who were designers of hospitals in pre-war days, were more or less idealists and unconsciously seemed to feel that the hospital should necessarily be a monumental structure, composed of indestructible materials that would ensure its existence for all time to come. Quite true, any institution for the use of the public at large should be of such a type as will create pride in the hearts of the citizens in the community where it is located. When, however, the method followed to obtain such monumental excellence leads to undue expenditure as to first costs, and at the same time does not in any way further the interests of the patients, we cannot but conclude that such practice is impracticable and uneconomical.

CANADIAN HOSPITAL CONSTRUCTION

MR. G. W. ALLSOP, Fellow of the Royal Institute of British Architects, and Architect to the Auckland Hospital Board in New Zealand, has been inspecting hospitals for the past several months, travelling far,—having been in the north of Scotland and Ireland, the battle-fields of France, to Venice, Rome—and incidentally to Monte Carlo (where he nearly lost money.) He says the British hospitals were disappointing—the Canadian ones, on the whole, being superior.

Writing to one of our editorial staff, Mr. Allsop says:—

Having completed my trip through Canada, England, Ireland, Scotland, France, Switzerland and Italy, I am now in New York and working across the States to Frisco and by boat from there home to Auckland, New Zealand.

My object is to inspect modern hospitals and note their general design, the materials used for internal finishings, the design of sanitary fittings and how installed, the cooking fittings and the multiplicity of other matters common to all hospitals.

Having spent five years in London studying hospital design, and obtained my degrees by taking this as a special subject, being architect to four Hospital Boards, and having devoted practically the whole of my time to hospital work during the last fifteen years, I think I can claim to be qualified to express an opinion upon what I have seen.

In New Zealand, we have a beautiful climate and we give great attention to flooding our wards with fresh air and sunlight; we also give great attention to cross ventilation of wards and sanitary towers. Our medical authorities are great believers in the curative properties of daylight, sunlight and fresh air.

In the Canadian institutions that I saw (about twenty), I noted a great absence of all these points. No doubt your severe climate influences your cross ventilation, but your wards impressed me as being dull and cheerless. I noticed the area of window space was considerably less than the area of wall space. There is no reason why this should not be reversed (as in our hospital); then your patients would have the benefit of the

curative properties of more daylight, sunlight, and in the mild weather of more fresh air.

All windows should have fan-lights over two feet deep, hinged at top, swinging outwards. Most of your windows have no fan-lights; the few that had I never saw one open. Again I noted a considerable space between the tops of windows and ceiling; this means a pocket for stagnant air. Obviously this space is of no advantage to the patients and adds considerably to the cost of the buildings. We always carry our fan-lights to within three inches of the ceiling.

Our authorities allow twelve hundred cubic feet per bed, and will not allow any measurement of height above the top of fan-light for the reason I have stated. When fan-lights are hinged at the bottom and fall inwards, the air, carrying a certain amount of dust, is turned up to the ceiling, which gradually discolors same; it also causes down-draughts on the patients. This is obviated by putting checks at the sides, then a pocket is formed, and I have seen dust over one inch thick lying at the bottom. Now, obviously, when a strong wind or gust blows, this dust is carried into the wards. But when the fan-light is hung at the top it swings out and forms a hood over the opening, preventing the rain from beating in; the air is not deflected on to the ceiling or patients, and no dust accumulates.

I have installed hundreds of these and many of them stand open all the year around, except when wards are being fumigated. Again, we place every bed between a pair of windows in all wards, whether of one or more beds. This gives more light and air to each patient. I note you do not study this point.

Many of your hospitals have chutes for soiled linen and some for rubbish. With but one exception they all had small doors opening into the corridors or passages. The advisability of this installation is, in my opinion, doubtful. When chutes do not exist the custom is to place the soiled linen in bags and these are taken away by the porter. If the chute exists, the soiled clothes are carried to and dropped down the chute. It is admitted (and can be seen) that the chutes become soiled; as the air inside the building is warmer than outside, these chutes become inlet ventilation shafts every time a door is opened, or

when doors are carelessly left open (I saw several instances of this;) consequently, air ascending this fouled chute is discharged inside the building.

The fact of a cold shower being fitted at the top of the chute is no guarantee that the blood, etc., will be all dissolved and the walls thoroughly cleansed. I did not find them so.

It is not advisable to study the saving of a small amount of work of the nurse or porter to the detriment of the health of the inmates. If the chute be omitted and a small room provided near lift for soiled linen, it should meet all requirements, and would cost considerably less. In the Ross Pavilion, at the Royal Victoria Hospital, Montreal, I was informed these chutes were omitted intentionally, and in my opinion this is the best designed hospital building in your Dominion.

Whilst all your hospitals have large numbers of radiators (steam or water) I did not see a single instance of a modern hospital radiator in use. The radiators consisted of two or more columns in a section, the sections were (in most cases) close together, no space being provided for cleaning; the radiators were fixed to the floor and close to the wall so that it was very difficult to clean under or at the back.

The proper hospital radiator has one column in a section, each section spaced wide apart for ease of cleaning, and the radiator fixed nine inches up from the floor to a bracket screwed to the wall. The radiator swings on this bracket like a gate, and can be pulled out from the wall at right angles so that the cleaning of the floor, wall and back of radiator is a matter of simplicity. These gate radiators have been in use for many years; they are made by Beeston's and other firms in England. I have installed many of them years ago, also recently, and they are quite satisfactory.

Radiators are not ideal fittings to install in operating rooms, owing to the many recesses forming lodgement for dust and germs. This can be overcome, to a great extent, by slipping over the radiator white linen covers; these can be washed frequently, they look nice and serve a useful purpose. In three hospitals only in Canada did I see them in use; they could, with advantage, be installed in all.

In the sanitary fittings, such as bed-pan sinks, W. C. sinks, and lavatory basins, I was disappointed. All the fittings I saw were similar to those used in domestic buildings; special fittings for years past have been designed, catalogued and installed in hundreds of British hospitals. Such firms as Doultons, Shanks, etc., of England, issue special hospital catalogues, showing and explaining these fittings in detail. They willingly send them for the asking.

All of these specially designed fittings are supported on brackets, built into the wall. No portion of the fitting rests upon the floor; they have no legs, consequently it is a simple matter to clean the floor under and around these fittings.

In no hospital did I see a urine bottle washer attached to the bed-pan sink. This is a most useful fitting; it cleans the bottle thoroughly and quickly and prevents the nurses having to do this in the old-fashioned way. In some hospitals there was no rising jet fitted to their bed-pan sinks; this was obviously an error in selecting the fitting, but many hospitals had them.

In one large hospital I visited in Canada they had the most remarkable fitting for a bed-pan sink I have yet seen. On the floor was fixed a cast iron trap and from this arose a cone four inches wide at the bottom and about twenty-four inches wide at top; from the floor to the top the height would be about thirty inches. Over the cone and about two feet above it, was a tap with a piece of rubber hose attached.

The cone was made of copper, was polished inside and out, and the appearance was very nice. But a more unsuitable, out-of-date, and obsolete fitting I have never seen installed, and hope I never shall. There was no flushing rim, no rising jet for washing bed-pans, and no bottle washer. The nurse had to empty the contents of the pan into the cone, then hold the pan in one hand whilst she played the hose upon it with the other, then the nurse had to lean over the cone whilst she directs the short length of hose upon the excreta, clinging to the sides and floating in the bottom, and finally someone has to lean over whilst they go through the tedious process of polishing this large surface of copper inside and out.

Why the medical and health authorities allowed this fitting

to be installed in a new building is beyond my conception. They are installed in operating rooms and all sanitary rooms; there are a large number of them in the building, and in all fairness to the nurses and patients, these fittings should be taken out and replaced with modern fireclay sinks with all fittings as I have previously described.

It will be obvious from this that a building may be of recent erection but not modern.

Tiled dados and tiled walls were not used nearly to the extent they should have been; the few I saw were mostly placed on top of the plaster, leaving a ledge at the top. The face of the tile should be flush with the face of the plaster. All walls, including corridors, should have tiled dados at least 4 ft. 6 in. high. They are easily cleaned, very durable, prevent the cutting away of plaster by moving articles, such as tables, trolleys, etc., and obviate the constant cleaning, scrubbing and re-painting which is otherwise necessary. This repairing comes under the heading of maintenance, which is the nightmare of the officials responsible for that department.

My object in writing in this strain is not one of fault-finding, but in the hope that by calling attention to these items they may receive attention when the new buildings are being erected.

Selected Article

THE LADY WITH THE LAMP

TORCH after torch has been lighted by hospitals and hospital nurses from the flame that the Lady of the Lamp held aloft over fifty years ago. On this her centennial day Toronto's nurses are asking for more torch holders.

Of all the tributes to the noble work of Florence Nightingale few are more moving than these words from the story of Florence Nightingale, of Hodder and Stoughton:

(The Crimean Veteran, lying ill in a London hospital, tells how, many years ago, the Lady lit the Lamp.)

Is that lamp going out? The light looks very low. Surely the oil hasn't given out?

That little night-lamp flickering away there on the hospital wall is the only thing between me and the utter dark.

Fancy an old man like me, a Crimean veteran, being afraid of the dark.

Well, I am afraid—I am afraid of the terror by night. I dread the night as much as any tiny frightened child.

Do you think the dark can ever bring anything but horror to an old soldier who spent a night on the blood-drowned slopes of the Alma, a night in a jolting litter, nights in a hospital ship, nights, nights, nights at Scutari?

It will be very wonderful to see the pearly gates and the golden streets, but I shall know I've really reached heaven when I try to remember the distant days that have passed—and cannot.

That's why I am so glad to know that it's always light in heaven, that there's no night there. Here in the night I try to forget—and cannot.

I can forget in the daytime in this clean and comfortable ward where everyone seems anxious to ease the last days of an old soldier who has fought for more than half a century, and has been wounded in many battles, wounded at Alma, wounded often and sorely in the daily skirmishes in the streets of the city, in the long pitched battle with age and want and care.

For I have been wounded in the house of friends and on the field of the foe, and peace has been for me a fiercer fight than war.

But every night as the darkness settles over the row of neat white-covered beds, I go right back over the long years and feel beneath me that other bed, that unclean thing in that dreadful hospital by the Bosphorus, and every night as I lie tossing in that unforgotten agony which the years have not lessened by a single pang, I watch that light over there and wait and wait till I see my Lady with the Lamp coming. It's only my fancy, of course, but somehow it seems to me, as I lie here, that still,

as in those Crimean days, she comes every night and holds it over my head.

Then at last I can fall asleep and forget, for I know that when she is near all will be well and that she will see that the lamp is trimmed and filled with oil. I know she will never leave me in the dark.

But to-night she has not come and the lamp looks so low. Surely it can't be going out.

That light, there, is just like the lamp she carried. How we waited for its appearance every night in that fearful blackness, how we watched it as it came slowly down that way of sorrow between the long lines of the wounded. Now and again it would stand still, and we caught sight of that sweet, slim black figure with the white cap, bending over something that was once a man.

Then it would move on again, and as it passed groans were hushed, mutterings were still, and men who could not move except in agony turned on their pillows to kiss her shadow on the bed.

Every night I lay with my eyes straining towards the first glimmer at the door, and I would sweat drops of anguish as a puff of wind caught the tiny flame and almost blew it out.

If that lamp had gone out before it reached me I should have died. It was the light of our life.

For in the dreadful darkness, so crammed with all that was terrible in death, and more terrible, so much more terrible, in life, that light was the one thing in a whole world of misery that told us we were not altogether cast away by God and man. It was the one thing on earth that spoke of love and pity and kindness to men who had lived for weeks on hate.

For weeks we had eaten and drunk hate, rolling horrid thoughts of revenge in our mouths.

One day before she came a soldier in the next bed called out: "They must hang someone for this," and I can feel now how, when we heard him, our eyes glistened and our faces flushed as we repeated to ourselves: "Whom will they hang? Someone will swing for this."

Surely we did well to be angry.

We had fought like men, and they had left us to die like dogs.

We had won a glorious victory and this was our reward.

We had looked unflinching into the jaws of the Russian artillery, with their flaming tongues and blackened teeth, as we lay on our faces on the slopes of the Alma; we had not wavered as the shrieking shells ripped their way into our midst. In all that two-mile line of red there was not a man who murmured as we dressed our ranks to fill the places of the dead.

We never halted in the vineyards by the river as we stumbled blindly through the storm of shot and shell—

“Forward, the first company!”—We did not shrink as we came within the range of the guns of the great redoubt, when canister and grape and rifle and musket balls swept us in blasts from every side—I can hear them shouting madly as the color gained the breastwork—and we had no feeling but pride in a day’s work well done as we fell at last—gasping, broken, shattered, on the hill side.

We uttered no complaint through the night as we lay where we fell among the dead and those who had been so much better dead. We knew the price we might have to pay. And we paid it.

We paid it as they carried us those four unending miles to the ship, every step a mile of torture, and as we neared Scutari and saw the brightness of the hills we thought in our folly we had paid in full.

Paid in full?

We did not begin to pay till we reached the place they had misnamed a Hospital, where at last, as we thought, we might rest or at least die in peace.

When I remember the sights of Scutari, the dripping slopes of the Alma seem like a garden of roses; when I think of the sounds of Scutari the whizz of bullets and the crackling of shells seem like sweet music; when I call to mind the smells of Scutari the reek of powder seems beautiful perfume.

They left us to rot and die in Scutari, our festering wounds undressed, our mangled bodies unclothed.

Beasts die no such death as my friends died there. Beasts live no such life as I lived there.

That's how my Lady of the Lamp found us. That is what we were like when she came to us with her little lamp in her hand.

To us she was just the Love of God, and her lamp the pity of man. When we saw her face, heard her voice, felt her touch, we knew that there was a God and that she must have come straight from Him to Scutari.

And we knew, too, that the lamp she carried had been filled with oil by those at home, knew that they had not altogether forgotten and forsaken us.

Through all these years, when life has been almost too hard to bear, when God seemed hidden and men without pity, I have watched for and waited for my Lady of the Lamp.

And she has always come, and I have always known that I was wrong, that God does not forget the wounded soldiers, and that while men may, and do sometimes forget, He always reminds them.

And when they remember, men are very kind.

I'm not proud of being a Crimean veteran—it was easy to be brave in those hours of splendid frenzy—but I am proud that after fifty years of battle, fifty years, mind you, not one glorious day at Alma, I owe no man anything, I've clean hands in a dirty world. My uniform is stained and ragged, but I've kept my honor untarnished, and I've never turned my back on the enemy.

For the peace and comfort and ease of pain that have come to me now—old, crippled, marred, scarred in the long years of battle—I thank my Lady of the Lamp who taught men to care for the wounded in war.

She has not come to me to-night.

But the lamp is there.

Surely it is not going out? Surely she will not leave me in the dark?

The Hospital Nurse takes up the story and tells how the work of the Lady with the Lamp still goes on.

If only the people cared now as they did then.

To-day we turn away men and women—and little children who have been wounded before the fight has fairly begun.

We could not take them, we had no room.

We are doing all we can but there is so much more we might do if only . . .

For a little time the veteran lay with his eyes straining towards the other end of the ward as if he expected someone to come in at the door. Then suddenly he started up, threw the clothes from him, and tried to rise. Do you see, Nurse? he said; that lamp is going out. And all for want of a little oil.

As I looked the night-light flickered and sank.

Her lamp must not go out, he said sharply. But what can I do? My Lady of the Lamp is not coming to-night. It may be the General has greater need of her somewhere else, or is she, at last, taking her rest?

Do you think I can sleep here when so many wounded are waiting for my bed?

It's so little I can do to help my Lady of the Lamp, but if I went out, Nurse—out into the dark, if my bed were empty you might perhaps save one, just one, wounded soldier.

It's all I can do. If I were rich, if I were strong . . .

I tried to soothe him, but he shook me off and tried to rise from his bed. "You shan't stop me," he cried. "I'm going—now. Look, her lamp is going out. Let me go at once. Now."

I looked at the light. It was almost out.

I turned back to the bed. The veteran had passed to where they need evermore no light of lamp.

But the little night light on the wall flamed up brightly again.

It was as if someone had just trimmed it, had filled it with oil.

And a shadow fell across the bed and softly smoothed the lines of battle on his face.

A Surface Like Tough Glass

Sanitary, easy-to-clean, impervious alike to boiling water, soaps and cleaning fluids.

DOUGALL UNIVERNISH

is the ideal varnish for floors, woodwork and general use in Hospitals and Sanitariums.

Heavy traffic will not mar or scratch the beauty of a Univernished Surface. Use it where the wear is hardest.

Supplied clear and in six transparent wood colors.

The Dougall Varnish Co., Limited

MONTREAL

Associated with Murphy Varnish Co., U.S.A.

Pure and Delicious

BAKER'S COCOA



Is a most satisfactory beverage. Fine flavor and aroma and it is healthful.

Well made cocoa contains nothing that is harmful and much that is beneficial.

It is practically all nutrition.

Choice Recipe Book Free.

Walter Baker & Co., Limited

DORCHESTER, MASS. Established 1780 MONTREAL, CAN

REGISTERED TRADE-MARK

When writing advertisers, please mention The Hospital World.

justed to a period in which metabolic changes are taking place at a much more rapid rate than at any subsequent time.

When the mother's milk is deficient, the "Allenburys" Milk Food No. 1, is an excellent substitute. It is practically identical with healthy human milk in composition, nutritive value, and digestibility. This food provides complete nourishment for the first three months of infant life or it may be used in conjunction with the breast without fear of causing the slightest digestive disturbance. The "Allenburys" Milk Food No. 1 contains no starch, and is free from pathogenic organisms. Its portability and stability render it particularly valuable in hot weather, on board ship, and wherever the milk supply is open to suspicion.

We Are 25 Years Old

The following announcement from Mr. M. H. Dix will interest the readers of THE HOSPITAL WORLD:—

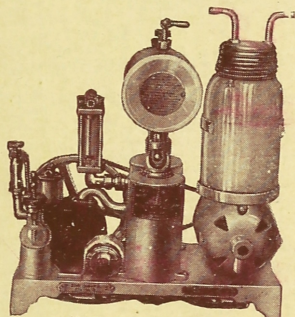
"Let this serve to record the fact that on the 6th of March, this business of ours reached its 25th anniversary. Begun, as most businesses do, in a humble way, in an unknown little town, by an unknown man, it first opened its doors at 214 High Street, Millville, N.J., on the 6th of March, 1896. Something besides mere money-making was in the heart and mind of its founder. *That 'something' was high ideals.* And in the recording of a quarter of a century of effort, it is fitting to emphasize how diligently and consistently these high ideals were lived up to and developed. Now, I give all the credit due to my father, who laid such a solid foundation to this nationally known house. But due credit is also to be given to our little army of workers, who during many years, have done their level best to live up to the high standards and to help us all to build the reputation 'Dix-Make' Garments now enjoy. It was our desire and determination to maintain this business in a healthy viril condition, and we felt we could only do so by retaining, year after year, the same staff of carefully trained and conscientious co-workers. As I write this there is activity and bustle in every department. Everyone is busy at his or her work, doing it with interest and with care. Thousands of 'Dix-Make' garments are being completed every week—and as fast as ready, out they go to dealers who know them and like them and keep on asking for more and more, year after year."

Connell
ANÆSTHESIA
APPARATUS

The Connell Suction Insufflation Apparatus

“BUILT FOR SERVICE—NOT ON PRICE”

WITH CASE OR HOSPITAL STAND, \$185.00



“IT'S SILENT”

The CONNELL SUCTION INSUFFLATION APPARATUS embodies all requirements for suction and for intratracheal, intrapharyngeal and closed ether vapor Anaesthesia complete in one machine.

It will deliver the required eighteen liters per minute of air for such work (more if needed).

Vaporizes ether by drop method through sight feed.

Delivery of ether and air controlled independently.

Ask your dealer for demonstration or write us for further particulars.

SCIENTIFIC APPARATUS COMPANY

162 WEST 34th STREET

NEW YORK CITY

Connell Gas Oxygen Apparatus—The Anaesthetometer—Connell Suction Insufflation Apparatus

The Battle Creek Sanitarium and Hospital

Established 1866

Medical Obstetrical Orthopedic Neurological Surgical Reconstructive

EDUCATIONAL DEPARTMENTS

Training School for
Nurses

Normal School of
Physical Education

School of Home Eco-
nomics and Dietetics

Students received on
favorable terms

Registered trained nurses
dietitians and physical
directors supplied



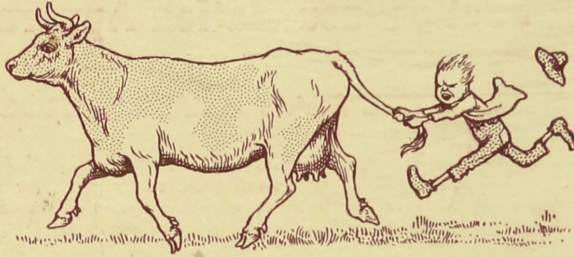
Descriptive Literature Mailed Free Upon Request

THE BATTLE CREEK SANITARIUM

Battle Creek

Box 179

Michigan



“NEVER BEHIND” is an axiom befitting this organization.

Our methods are so highly scientific they find company in the very advanced practices of the Medical Profession.

In our treatment of milk and kindred products we follow advice of the mightiest medical minds of our country.

We mention these truths because of their worthiness, and the importance of consistent consumption of Milk.

City Dairy
TORONTO