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SANITARY SURVEY

OF

GREENSBURG PENNSYLVANIA



BY

EDWARD L. BORTZ
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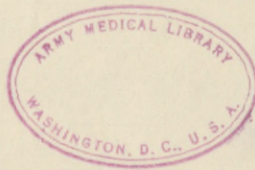
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PENNSYLVANIA GREENSBURG



BY
EDWARD L. BORTZ

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INTRODUCTION

INTRODUCTION

Greensburg, Pennsylvania, is situated in the western foothills of the Allegheny Mountains, along the main line of the Pennsylvania Railroad lines west from New York. It is thirty miles east of Pittsburgh, Pennsylvania, and is a junction point for the Southwest branch of the Pennsylvania Railroad, which extends to Connellsville and Uniontown, Pennsylvania, with the main line of the Pennsylvania system.

Greensburg is easy of access from all directions. The town is the directing center of the industries of Westmoreland County. The public buildings are among the finest in the State of Pennsylvania.

Greensburg is the gateway to the Connellsville coke region. The area contains 88,000 acres of coal land, 50,000 of which are yet unmined. It is a half mile wide at the narrowest and three miles wide at the widest point.

History:

Greensburg is the county seat of Westmoreland County. This county was formed from part of Bedford County, February 26, 1773 and included all of southwestern Pennsylvania, westward from the Laurel Hill Mountains, and embraced nearly all the territory in Allegheny, Armstrong, Greene, Fayette, Indiana,



A reprint of an old reproduction of General Nathaniel Greene in honor of whom the town was named. One of the brilliant leaders in the War of the Revolution whose efforts aided in establishing the "Land of the free".

and Westmoreland Counties as they are today. Westmoreland was one of the eleven original Provincial Counties.

Hannastown, three and one-half miles east of Greensburg, was the County Seat, and so continued until December 10, 1785. At Hannastown, justice, according to the white man's idea, was first judicially administered west of the Allegheny Mountains. Here the frontiersmen made the first public protest against English tyranny, and adopted Westmoreland County's Declaration of Independence, more than a year before the Philadelphia Declaration. Hannastown was destroyed by Indians, after an exciting contest. Greensburg became the County Seat.

The town was named Greensburg in honor of General Nathaniel Greene who had died at Savannah, Georgia, June 9, 1786, and under whom many of the soldiers from this County had served in the War of the Revolution. Greensburg was incorporated into a borough February 9, 1799. The earliest name of the town was Newtown, given by Colonel Christopher Trully, but was changed to Greensburg.

Probably the most important historical personage of the County during the Revolutionary period was Major-General Arthur St. Clair, the friend and comrade of George Washington. The remains of General St. Clair now lie in the St. Clair Cemetery in Greensburg.

In 1799 the first newspaper, "The Farmers' Register", was published. Two editions, an English and a German edition, were published.



GREENSBURG IN 1840.

An old print which shows the size of the town in 1840.
Note the rolling characteristic of the land upon which it grew.



GREENSBURG'S FIRST COURT HOUSE

The first Court House as constructed by the colonists was
not a pretentious structure but it served well their needs.

The census of 1810 gave the population as 685. Ten years later, 1820, old newspaper accounts give the population as 770.

There were slave markets in Greensburg and advertisements of slaves appeared in the newspapers. In the court house square was the regular auction block where negroes were sold. As late as 1817 public slave auctions appeared in the town, and slavery existed in the County until 1840.

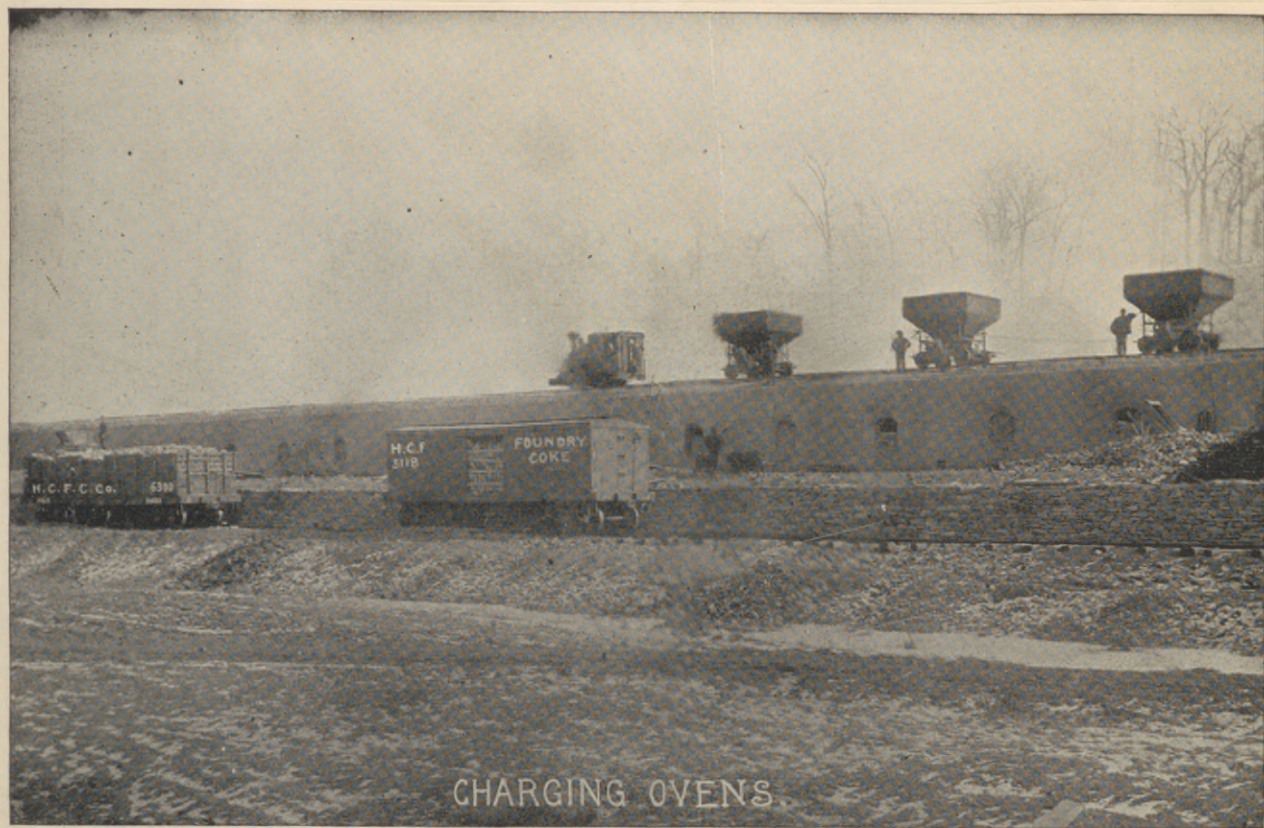
On a hill east of Greensburg was a cluster of log cabins called "Irish Town"; to the west was "Dutch Town".

In September, 1858, a great fire occurred, beginning in a stable, and spreading, it destroyed over \$30,000 worth of property, a severe loss in those days. The part destroyed was referred to as the "Burnt District" and was but slowly reclaimed.

Around the town, coal mines, coke works, factories, and foundries developed, and these all influenced the growth of the town until the present, when it is soon to become a city.

Geographical Position:

The town is situated in the southwestern part of the State of Pennsylvania, thirty miles southeast of Pittsburgh. Its longitude west from Washington, D. C., is 2° 30' 20"; west from Greenwich, England, it is 80° 30". The latitude is 40° 17' 10".



CHARGING OVENS

A scene typical of the environs of Greensburg showing the coke ovens and the small square cars above which fill them with coal. At night time the burning ovens light up the heavens with their flames making a weird and beautiful sight for the passing traveler to look upon.

The solar time of the town is 11:50 when it is noon on the meridian at Washington, D. C., and 5:08 P. M. at Greenwich, England.

Topography:

Greensburg is situated in the western foothills of the Appalachian Mountain chain which courses through the central part of Pennsylvania from northeast to the southwest.

The town proper is situated on six hills, with corresponding valleys in between. The highest of these is less than a thousand feet from sea level. The main street of the town is on the crest of two of these hills, Two hills are to the east, two in the center, and two to the western part of the town. Two streams running south, one in each valley, aid in the disposal of the town's sewage.

Climate:

There are no extreme temperature fluctuations throughout the year. The winters are generally mild with perhaps a drop of temperature to zero, Farenheit, six times each winter.

The summers likewise offer no extreme degrees of heat although hot waves prove at times quite uncomfortable to the population.



Main Street looking due north from Third Street. This street is the principal thoroughfare of the town, and on it are located many of the leading business houses.

The atmosphere is far from pure. The town is situated in the Connellsville Coal Belt and with the mining of coal, and the many factories pouring out smoke in the vicinity and all over the western part of Pennsylvania, the dust and dirt floating through the atmosphere is sufficient to cause many of the inhabitants to seek different climes at various times of the year.

The mean temperature in summer is about 72 degrees; in winter, 32 degrees. The annual rain fall for the western part of Pennsylvania averages about 40 inches.

Geology:

The underlying geological layers of western Pennsylvania are known as the Pottsville conglomerate (Millstone grit) below, and the coal measures above.

The lowest formation of the Pottsville conglomerate is sandstone or conglomerate. The thickness of this formation is presumably about 400 feet.

The coal measures lie above the millstone grit layer. These measures consist of alternating beds of shale, sandstone, conglomerate, limestone, coal, and a certain amount of iron ore. Shale is the thickest bed of all. The coal and iron are interstratified with the other members of the series, and are regarded as strata of rock.

VIEWS OF GREENSBURG.



METHODIST CHURCH.



COURT HOUSE.

Population:

The population of Greensburg at the time of the 1921 census was 15,033. Within the last year several new industrial concerns have furnished employment for several hundred people, thus increasing the population to over 16,000 inhabitants, the exact number not yet having been ascertained.

Of the surrounding towns, South Greensburg showed a population of 2,188 in the 1921 census. The population of Southwest Greensburg is given as 2,538.

The outlying districts are populated by individuals employed in the various coal mines.

Further out lie the farms, which are generally small, averaging eighty to one hundred acres. The land is fertile and the crops are bountiful.

Organization of Board of Health:

The Board of Health consists of five members, one of which must be a reputable physician. The members of the Board are appointed by the President of the City Council, with the approval of the Council proper. The term of office is so arranged that one new member is appointed each year. The Board meets at stated intervals for the purpose of surveillance of the

general health of the community. The Board is active, efficient, and well organized. The Secretary of the Board has held his office by re-appointment for twenty years. The statistics of the Board are open for the inspection of the public, and the Board welcomes any constructive criticism incident to the community welfare. Mr. Samuel Clements is Secretary of the Board, and the other members are Dr. C. C. Porter, Edward Keck; and Mason Welty. One vacancy exists at present, several reputable men being considered for the position. None of the members are paid except the Secretary.

General:

As a city, Greensburg has so far shown a lack of civic pride. There is no Public Library or Public Park, no general assembly hall other than the High School Auditorium.

The streets are generally well kept up, but many alley ways, especially in the outer districts of the city, are difficult of passage and poorly lighted.

The population is made up of old established families, and others, comparatively newcomers, from other sections of the state and country, drawn here by the industrial forces including the coal, glass, chinaware and steel manufactories.

While the foreign element, composed chiefly of Italians, Poles, Serbians, Negroes, Armenians, and Russians, are all represented, the total number is but a small percentage of the entire population.

W A T E R

WATER

Greensburg has two sources of water supply. The first is from its own system of reservoirs; the second is by connection with the pipe lines of the Mountain Water Supply Company which obtains its water from the mountain in the Indian Creek region, forty miles south of Greensburg. This company furnishes the Pennsylvania Railroad with water in this region.

Ten miles east of Greensburg and five miles south of Latrobe is the Immel Reservoir near Lycippus. Three streams of water enter this reservoir: -

(a) The nine mile stream with drainage area of 0.41 square miles, opens directly into the reservoir.

(b) The Sewickley stream entering from the south, is brought into the reservoir by a small intake. This stream has a drainage area of 0.81 square miles.

(c) The Armel stream to the north also enters by a pipeline. It drains an area of 1.4 square miles.

The entire drainage area for the Immel Reservoir is 2.62 square miles.

A pipe line connects the Immel Reservoir to Unity Reservoir which is a storage reservoir. It has a drainage area of 0.6 square miles. The Dry Ridge Reservoir is the equalizer for pressure. The elevation of the Immel Reservoir is 1422 feet; of Unity Reservoir is 1250 feet; of Dry Ridge Reservoir 1300 feet.



Two views of the Immel Reservoir situated ten miles east of Greensburg, far up in the Ridge, as the foothills of the Allegheny Mountains are called. Up here it is singularly free from smoke and filth, and furnishes a suitable location for obtaining pure water .



From the Dry Ridge Reservoir are two pipe lines which bring the water to the city, a twelve inch and an eighteen inch line. Near South Greensburg is an outlet from the Mountain Water Supply Company. The outlet is a twelve inch tap on the thirty-six inch main.

From these two lines the city receives its supply of water. Other reservoirs exist for surrounding towns and are under the control of the Westmoreland Water Company.

Greensburg and suburbs have a water consumption of two million gallons daily. Figures for the town proper have not been compiled.

Sources of Pollution:

The principal reservoir from which the city derives its water is the Immel Reservoir. This is located far up in the mountains and is singularly free from any flagrant and open sources of pollution. A Catholic Monastery is situated above the reservoir and on the crest of the ridge. This, however, has an efficient disposal system which aims to protect the reservoir from pollution. The ridge is thickly wooded. Wild animals and hunters, and picnic parties might be mentioned as possible sources.

The Indian Creek region, from which the Mountain Water Supply Company gets its water, drains a large area of several square miles which embraces much cultivated land. No surface supply of water is safe unless treated with some disinfecting solution, such as liquid chlorine, etc.

Purification:

The Westmoreland Company treats the water with chlorine. The machines used, a chlorine control apparatus manufactured by Wallace, Tieman Company of Newark, New Jersey, can be set to treat the water of any given rate. The usual rate is four pounds of chlorine per million gallons of water. This, of course, is so slight in amount that it is imperceptible to taste, yet quite efficient in action. The containers used in the process each contain 150 pounds of liquid chlorine. The chlorine stations are located, one at the point where the water leaves the Immel Reservoir, one at a pumping station before coming over the ridge, and one at the point where water is received from the Mountain Water Supply Company.

Water Analysis:

August 25, 1922.

Sample	Bacteria per c.c.		B. coli found in		
	37' on agar	20' gelatin	1/10 c.c.	1 c.c.	10 c.c.
Indian Creek (after chlorine treatment)	19	21	0	0	0
Indian Creek (Before chlorine treatment)	30	43	0	X	X
Unity Reservoir	34	26	0	X	X

Analysis made in Laboratory of Morris ~~and~~ Knowles.

Bacteria at 20' centigrade are cold water bacteria. An increase of the temperature to 37' should make a reduction of ten to one in the number of bacteria found. Monthly bacteria counts are made. If the count is high an immediate effort is made to correct the condition and the counts are then made until the report is satisfactory.

Per 100,000 parts	<u>Chemical Analysis</u>	
	Indian Creek	Immel Reservoir
Free NH ₃	0.002	0.006
Albuminoid NH ₃	0.0120	0.008
N in Nitrites	Trace	None
N in Nitrates	None	Trace
Chlorine	0.60	0.50
Alkalinity	2.25	1.00
Sulphuric Anhydride	1.10	0.75
Lime	1.35	0.85
Magnesia	0.73	0.12
Total solids	7.72	5.0
Loss on ignition	3.80	1.8
	Solids darken slightly on heating	Solids darken on heating.

Albuminoid Ammonia Nitrogen and the Nitrogen ascertained in nitrite form represent pollution. By a glance at the chemical analysis of the water used by Greensburg, it is seen that the amount of nitrogen representing pollution is slight and the water may be used with safety.

Private Wells:

Greensburg has few private wells. In 1921 an outbreak of several cases of typhoid fever in East Greensburg drew the attention of the Board of Health to a private well which was proved to be the source of infection. Proper measures were immediately taken to wipe out the contaminated water and nullify its infective character.

It may be added here that the city has two public drinking fountains, one in front of the Court House, and another near the Post Office, both of which have city water.

S E W A G E

SEWAGESystem of Disposal:

The sewage disposal system of Greensburg is a simplified affair, being composed of two streams of water, Coal Tar Run and Jacks Run. These streams have a north to south course and meet near the southern borough limit where South Main Street and Mt. Pleasant Street converge. The sewage of the city is collected by a system of underground pipe lines. These lines empty the sewage into the two small streams. Coal Tar Run has its origin several miles north of Greensburg. Two miles north of the city limit the Greensburg Shaft Mine pumps all of its sulphur into Coal Tar Run. This furnishes to the water a powerful disinfectant with moderate deodorizing power to nullify the sewage odors. As the stream approaches the city limit it is converted into an underground waterway. This passes through the city in the valley between Bunker Hill on the west and Main Street Hill on the east. This stream takes care of the sewage from approximately the western half of the city.

Jacks Run begins near Shoemakers Farm, two miles to the northeast of the city. It is formed by the junction of a meadow stream with the sulphur stream formed nearby from the pumpage of the Keystone Shaft Mine. Jacks Run passes through the city from northeast bearing to southwest. It is uncovered



Sewage System; The upper view shows Jacks Run just before it joins Coal Tar Run beyond the bridge seen in the picture. The bridge represents Mt. Pleasant Street.

The lower view is of the two streams as they come together. It is needless to state that the inhabitants, chiefly of the foreign element of the town, are subjected to unpleasant odors coming from the streams. People live in the dwellings shown in the pictures.



along its entire course. This stream receives sewage from approximately the eastern half of the city. The course of the stream is in the valley between Main Street Hill and Academy Hill on the west, and East Greensburg Hill on the east.

Efficiency:

The plan of this system is seen to be satisfactory as it fulfills the purpose for which it is used. The city is fortunate in being situated in just this position, for these streams, by caring for this vital need of the community, are the means of saving considerable money which would be required for a sewage disposal plant.

The question has been raised concerning the disposal of sewage if the mines which supply the sulphur should shut down. Fortunately these mines are situated over a thick vein of coal and will be worked for years without exhausting the supply. During temporary shut-downs the huge pumps are kept running. Thus a constant and never ceasing supply of sulphur water is insured the city for years to come.

Relation to City Health:

The sewage disposal is cared for in such a manner that, according to the Secretary of the Board of Health, no epidemics of any kind have arisen in the community up to this time.

Isolated cases have been reported where the streams have been subject to suspicion, but these are rare. No cases of infectious diseases have been reported from surrounding towns that have indicated the source of infection as coming from the Greensburg disposal system.

Criticism:

The origin of the sulphur water which is the neutralizing agent in the waterways for the system is incidental to the mining of coal from the different mines. When this ceases, the authorities will have to construct an entirely new method of neutralization. Furnishing the sulphur is under the control of private corporations and any time they choose they may direct the sulphur stream into other channels, for instance, if the sulphur were desirable for other purposes.

Jacks Run along its entire course through the city is uncovered. Flies cannot but jeopardize the health of individuals living nearby, as is the case. Further, Jacks Run and Coal Tar Run meet within the city limits south and from there on remain uncovered.

While the present system of neutralization works efficiently, it appears desirable for the authorities to be prepared to furnish a new system immediately to the city when the present system proves inadequate, as it some time will.



The sewage system; The upper picture shows Coal Tar Run as it emerges from its underground passage at the junction of South Main Street and Mt. Pleasant Street. On the right of the upper picture is seen Jacks Run joining Coal Tar Run.

The lower view shows the two streams as one coursing due south.



G A R B A G E R E F U S E A S H E S

GARBAGE REFUSE ASHES

Just outside the city limits southwest, located on a hillside, is a small disposal plant, operated by a negro. Three large trucks and two wagons transfer the garbage and refuse from the city to the disposal plant. The stores, factories, and hotels have daily service, and the town service is weekly.

At the plant is located a large furnace with two openings each about 45 c.m. in diameter, through which the garbage is placed in the furnace. Below is found the fire bed with five openings to the side of the furnace for proper control of the fire. One man is in charge of the running of the furnace. Tin cans and other unburnable material are relegated to the adjoining dump.

There are great numbers of rats around everywhere and flies are much in evidence.

Ashes are hauled into various lot spots in the city, along Jack's Run, and also placed on the sides of the railroad bank which courses through the city east and west.

The present system for disposal of garbage and refuse functions fairly well. However, its control is subject to change and its efficiency over any length of time is variable. In order to have a well organized and efficient means of disposal the city council passed by vote a sixty-thousand dollar bond issue for the purpose of constructing an Incineration Plant.



Two further views of the Disposal Plant. The appearance of the spot suggests the accompanying odor of the vicinity. The pictures fail to show the numerous vermin which found a refuge in the mass of debris .



It was planned to have this plant along the southwest branch of the Pennsylvania Railroad below the Lumber Company's ground, but citizens unwilling for such a plant to be located in the region were successful in having an injunction issued against it.

Recently the city council awarded the contract for building an incineration plant, said building to cost \$21,139.00, while the incinerator is to cost \$13,874. A forty-one acre tract was purchased for \$9,500.00. This land is located southeast of Greensburg . The total cost of the plant will be, therefore, approximately \$44,513.00.



These two pictures of the Disposal Plant serve to indicate the disorderly and haphazard method used by the proprietor in disposing of the rubbish. In taking these pictures, the writer could get no nearer because of the heat of the furnace.



VITAL STATISTICS

VITAL STATISTICS

In a sanitary survey of Greensburg perhaps the most discouraging results of all will be found in the activity that leads the investigator into the field of vital statistics. Records in the hands of the Board of Health are not systematically ordered and kept up. True it is that Greensburg is but a town of approximately fifteen thousand inhabitants and small variations or fluctuations on plotted curves and charts would give a rather meagre bit of added information, yet they are desirable from the point of view of comparison with the past, present, and future.

The Secretary of the local Board of Health placed his documents and data at the disposal of the writer. He cooperated in every possible way. The statistics given below were obtained from permits granted to undertakers for burial purposes. These cards stated the cause of death in each case. The writer searched through the permits granted throughout the county, and secured the statistics on Greensburg. It is obvious that some of these permits may have been misplaced, others lost and some not filed, so that the data obtained is not to be accepted without reservation. The writer found no statistics in the Court House. A letter of inquiry to the State Department of Health, located at Harrisburg, Pennsylvania, was not answered.

A visit to the Library of the Department of Preventive Medicine at the Harvard Medical School for light on the subject showed that, up until March 23, 1923, the authorities in the Department of Health in Harrisburg had failed to comply with the request of the Secretary to Dr. Rosenau that the records be completed. The latest records available were of 1916.

According to the statement of the Secretary of the local Board in Greensburg, the death rate for Greensburg for 1921 was 10 per 1000. Infant mortality was not obtainable. The specific rates for separate acute or chronic infectious diseases is not regularly calculated. Fifty-seven cases of measles were reported in 1921.

For 1921, the number of deaths from specific diseases was as follows: -

Typhoid	7
Tuberculosis	14
Scarlet fever	2
Diphtheria	6

Suggestions for improvement are not difficult to commend. Practically, the health of the town is efficiently guarded by the local Board. At the least indication of any kind of an epidemic arising, the Secretary immediately orders and personally conducts a vigorous campaign for the purpose of safe-guarding the community. An orderly and systematic manner

CHARLES H. MINER
COMMISSIONER



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH
HARRISBURG

April 10, 1923.

Mr. Edward Bortz
264 Aspirwall Ave.
Brookline 46, Mass.

Dear Sir :

In reply to your request the following information is supplied :

BOROUGH OF GRENSBERG, PENNSYLVANIA -- 1922

Death rate, all causes, per 1,000 population	18.0
Infant mortality (Deaths of infants per 1,000 births)	57
Death rate -- Typhoid fever, per 100,000 of population	58.3
Tuberculosis all forms per 100,000 of population	25.9
Measles	0.0
Scarlet fever per 100,000 of population	13.0

Yours very truly,

Charles H. Miner
State Registrar.

Clb

of recording is the outstanding need of the Board of Health,
which in other ways fills the purpose for which it exists
quite acceptably.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH
PHYSICIAN'S CERTIFICATE

THIS CERTIFIES that I have carefully examined

....., Age.....,
residing at Absent from school

on account of and that I now find
him or her to be free from any contagious or infectious disease or condition
transmissible to others.

..... M. D.
Legally Licensed Doctor of Medicine

..... 19..... Address.....

This certificate only for the re-admission of pupils absent from school on
account of trachoma (granular eyelids), pink-eye, tonsillitis, scabies, impetigo,
ringworm, head lice or body lice, favus, or lupus and non-communicable
diseases.

For the major contagious diseases requiring placarding or quarantining,
the Health Officer's Certificate of release from quarantine is required for re-
admission to school. The physician issues Form 39 to the Health Officer.

Form V. S. No. 11-100M-2-29-16.

PLACE OF BIRTH

COMMONWEALTH OF PENNSYLVANIA

Bureau of Vital Statistics

CERTIFICATE OF BIRTH

County of

Township of

or

Borough of

or

City of

No., St.

Registration District No.

File No.

Primary Registration District No.

Registered No.

Ward.

FULL NAME OF CHILD

Sex of Child	Twin, Triplet, or other? (To be answered only in event of plural births)	and { Number in order of birth	Legitimate?	Date of birth....., 19..... (Month) (Day) (Year)
--------------	---	--------------------------------	-------------	---

FATHER		MOTHER	
FULL NAME	FULL MAIDEN NAME	FULL NAME	FULL MAIDEN NAME
RESIDENCE	RESIDENCE	RESIDENCE	RESIDENCE
COLOR	AGE AT LAST BIRTHDAY (Years)	COLOR	AGE AT LAST BIRTHDAY (Years)
BIRTHPLACE	BIRTHPLACE	BIRTHPLACE	BIRTHPLACE
OCCUPATION	OCCUPATION	OCCUPATION	OCCUPATION

Number of child of this mother, including present birth..... Number of children, of this mother, now living, including present birth.....

CERTIFICATE OF ATTENDING PHYSICIAN OR MIDWIFE*

I hereby certify that I attended the birth of this child, who was....., at..... M.
on the date above stated. (Born alive or Stillborn)

{ *When there was no attending physician or midwife, then the father, householder, etc., should make this return. A stillborn child is one that neither breathes nor shows other evidence of life after birth.

(Signature)
.....
(Physician or Midwife)

Given name added from a supplemental report

....., 19.....

Address

.....
Registrar

Filed, 19.....
Registrar

MARGIN RESERVED FOR BINDING

WRITE PLAINLY, WITH UNFAADING INK—THIS IS A PERMANENT RECORD

N. B.—In case of more than one child at a birth, a SEPARATE RETURN must be made for each, and the number of each, in order of birth stated

Communicable Diseases
To Be Reported

Actinomycosis
Anterior Poliomyelitis
Anthrax
Bubonic Plague
Cerebrospinal Meningitis
Chickenpox
Cholera (Asiatic)
Diphtheria (Membr. Croup)
Epidemic Dysentery
Ery-sipelas
German Measles
Glanders (Farcy)
Impetigo Contagiosa
Leprosy
Malarial Fever
Measles
Mumps
Ophthalmia Neonatorum
Para Typhoid Fever
P. lagna
Pneumonia (True)
Puerperal Fever
Rabies
Relapsing Fever
Scabies
Scarlet Fever
Smallpox
Tetanus, Trachoma
Trichiniasis
Tuberculosis (All forms)
Typhoid Fever
Typhus Fever
Uncinariasis
Whooping Cough
Yellow Fever

Occupational Diseases
To Be Reported

Anthraxosis
Caisson Disease
Poisoning from
Arsenic
Bisulphide of Carbon
Brass
Carbon Monoxide
Dinitrobenzene
Lead
Mercury
Naphtha
Natural Gas
Phosphorus
Wood Alcohol

PLACE
STAMP
HERE

Sec.

BOARD OF HEALTH

S. W. GREENSBURG,

PENNA.


Form 75-B

PRELIMINARY CERTIFICATE GOOD ONLY FOR FIFTEEN DAYS AFTER VACCINATION

This certifies that on the.....day of.....19.....
I vaccinatedon the (left)
(right).....by inoculation with anti-smallpox virus into an abrasion of
the skin. THE SUCCESS OF THIS VACCINATION MUST BE DETERMINED
UPON EXAMINATION EIGHT OR MORE DAYS AFTER THIS DATE.

.....M. D.
(Legally Licensed Doctor of Medicine.)

Address.....

 This preliminary form is necessary only in order to permit school attendance during the time between vaccination and the determination of the result.

PRESENT THIS CERTIFICATE TO THE PHYSICIAN WHEN RETURNING FOR EXAMINATION.

1. PLACE OF DEATH.

County of Westmoreland
 Township of Hempfield

CERTIFICATE OF DEATH.

Registration District No. X
 Primary Registration District No. XX
 City of Greensburg (No. 5221 Fourth Street St.;
 or
 Borough of Hempfield)
 or
 City of Greensburg (If death occurred in a
 Hospital or Institution,
 give its NAME, instead
 of street and number.)

COMMONWEALTH OF PENNSYLVANIA.
 DEPARTMENT OF HEALTH
 BUREAU OF VITAL STATISTICS.

File No. A-1
 Registered No. 3021

WRITE PLAINLY WITH UNFADING INK—THIS IS A PERMANENT RECORD.
 Every item of information should be carefully supplied. AGE should be stated EXACTLY. PHYSICIANS should state
 CAUSE OF DEATH in plain terms, so that it may be properly classified. Exact statement of OCCUPATION should be very
 important. See instructions on back of certificate.

PERSONAL AND STATISTICAL PARTICULARS

3. SEX M 4. COLOR OR RACE White 5. SINGLE, MARRIED, WIDOWED OR DIVORCED Single

6. DATE OF BIRTH January 12 1890 (Month) (Day) (Year)
 If LESS than 1 day how many.....hrs. or
 32 yrs. 6 mos. 24 ds.min.?

8. OCCUPATION
 (a) Trade, profession, or particular kind of work Laborer.
 (b) General nature of industry, business, or establishment in which employed (or employer) Highway Dept.

9. BIRTHPLACE (State or Country) Ireland.

10. NAME OF FATHER Michael O'connor.

11. BIRTHPLACE OF FATHER (State or Country) Ireland.

12. MAIDEN NAME OF MOTHER Katherine Dugan.

13. BIRTHPLACE OF MOTHER (State or Country) Ireland.

14. THE ABOVE IS TRUE TO THE BEST OF MY KNOWLEDGE.

(Informant) John Wagoner
 (Address) 2107 Fourth Street

15. Filed E.S. Kwaner Local Registrar
 191.....

MEDICAL CERTIFICATE OF DEATH

16. DATE OF DEATH July 6 1922 (Month) (Day) (Year)

17. I HEREBY CERTIFY, That I attended deceased from July 1 1922 to July 6 1922.
 that I last saw him alive on July 6 1922
 and that death occurred, on the date stated above, at 2 P.M.
 THE CAUSE OF DEATH* was as follows.
Lobar Pneumonia.

Contributory (Secondary) Cardiac Decomposition yrs. mos. 6 ds.
 (Duration) yrs. mos. 1 ds.

(Signed) Edward Bout M. D.

July 7 1922 (Address) 235 West Pitts. St.

*State the DISEASE CAUSING DEATH; or in deaths from VIOLENT CAUSES, state (1) MEANS OF INJURY; and (2) whether ACCIDENTAL, SUICIDAL, OR HOMICIDAL.

18. LENGTH OF RESIDENCE (For Hospitals, Institutions, Transients or Recent Residents).
 At place of death.....yrs.....mos.....ds. State..... In the
 Where was disease contracted, if not at place of death?.....
 Former or usual residence.....

19. PLACE OF BURIAL OR REMOVAL Catholic Cemetery DATE OF BURIAL July 9 1922

20. UNDERTAKER H.S. Coshey ADDRESS N. Penn Av.

MARGIN RESERVED FOR BINDING.

A stillbirth must be registered both as a birth and death. The date of death should be the date of delivery and the death certificate should further state, if known, the cause of the stillbirth and the period of utero gestation in months.

Statement of occupation.—Precise statement of occupation is very important, so that the relative healthfulness of various pursuits can be known. The question applies to each and every person, irrespective of age. For many occupations a single word or term on the first line will be sufficient, e. g., *Farmer, Physician, Stenographer, Composer, Architect, Locomotive engineer, Civil engineer, Stationary fireman, etc.* But in many cases, especially in industrial employments, it is necessary to know (a) the kind of work and also (b) the nature of the business or industry, and therefore an additional line is provided for the latter statement; it should be used only when needed. As examples: (a) *Spinner, (b) Cotton mill; (a) Salesman, (b) Grocery; (a) Foreman, (b) Automobile factory.* The material worked on may form part of the second statement. Never return "Laborer," "Foreman," "Manager," "Dealer," etc., without more precise specification, as *Day laborer, Farm laborer, Laborer—Coal mine, etc.* Women at home, who are engaged in the duties of the household only (not paid *Housekeepers, who receive a definite salary*), may be entered as *Housewife, Housework, or At home*, and children, not gainfully employed, as *At school or At home*. If the occupation has been changed or given up on account of the DISEASE CAUSING DEATH, state occupation at beginning of illness. If retired from business, that fact may be indicated thus: *Farmer (retired, 6 yrs.)* For person who have no occupation whatever, write *None*.

Statement of cause of death.—Name, first, the DISEASE CAUSING DEATH (the primary affection with respect to time and causation), using always the same accepted term for the same disease. Examples: *Cerebrospinal fever* (the only def-

inite synonym is "Epidemic cerebrospinal meningitis"); *Diphtheria* (avoid use of "Croup"); *Typhoid fever* (never report "Typhoid pneumonia"); *Lobar pneumonia; Bronchopneumonia* ("Pneumonia," unqualified, is indefinite); *Tuberculosis of lungs, meningis, peritonaeum, etc., Carcinoma, Sarcoma, etc., of.....* (name origin; "Cancer" is less definite; avoid use of "Tumor" for malignant neoplasms); *Measles; Whooping cough; Chronic valvular heart disease; Chronic interstitial nephritis, etc.* The contributory (secondary or intercurrent) affection need not be stated unless important. Example: *Measles* (disease causing death), *29 ds.; Bronchopneumonia* (secondary), *10 ds.* Never report mere symptoms or terminal conditions, such as "Asthenia," "Anæmia" (merely symptomatic), "Atrophy," "Collapse," "Coma," "Convulsions," "Debility, (Congenital)," "Senile," etc.), "Prophy," "Exhaustion," "Heart failure," "Hæmorrhage," "Inanition," "Marasmus," "Old age," "Shock," "Uræmia," "Weakness," etc., when a definite disease can be ascertained as the cause. Always qualify as "PUERPERAL septicæmia," "PUERPERAL peritonitis," etc., all diseases resulting from childbirth or miscarriage. State cause for which surgical operation was undertaken. For VIOLENT DEATHS state MEANS OF INJURY and qualify as ACCIDENTAL, SUICIDAL, or HOMICIDAL, or as probably such, if impossible to determine definitely. Examples: *Accidental drowning; Struck by railway train—accident; Revolver wound of head—homicide; Poisoned by carbolic acid—probably suicide.* The nature of the injury, as fracture of skull, and consequences (e. g., *sepsis, tetanus*) may be stated under the head of "Contributory."

M I L K

MILK

The Highland Farms Dairy is located on the Five Points Road, one and a half miles northeast of Greensburg. There are thirty-five registered Jersey cows and two registered bulls in the herd, all tuberculin tested. The dairy barn has modern equipment. The floor is concrete. The stalls are arranged with steel bars between the cows. To each two cows there is an automatic drinking cup which, when the nose is pressed into the cup, fills it with city water. The walls of the barn are white-washed twice weekly. The windows and doors are screened to keep out flies. The floor is sprayed with 3% creolin twice a week after being washed with water. The stalls are arranged in two rows, facing each other with an aisle in between. In this aisle runs an overhead track with carrier for food. Behind each row of stalls is another overhead track for disposal of manure.

The feeding is not done until after the milking in order to avoid contamination of the milk. The cows are groomed daily. Before milking, the flanks, udders, and teets are washed with 0.5% creolin, then wiped dry.

The milking is done by a DeLaval milking machine which works on the principle of alternate suction. There is an individual pulsater for each cow. The milk is received into sterile covered buckets. The men wear clean white coats and

Edw. Jansky

HIGHLAND FARMS



GREENSBURG, PA.

A Thesis
on
Milk

by
HIGHLAND FARMS
Greensburg, Pa.





Introductory

IN this little booklet, we desire to tell you something about milk, what it is, where it comes from, its chemical composition, its food value, certified milk. Why pasteurization and clarification is necessary. How milk is produced, handled and distributed by **HIGHLAND FARMS.**





CHAMPION'S TULIE No. 370397



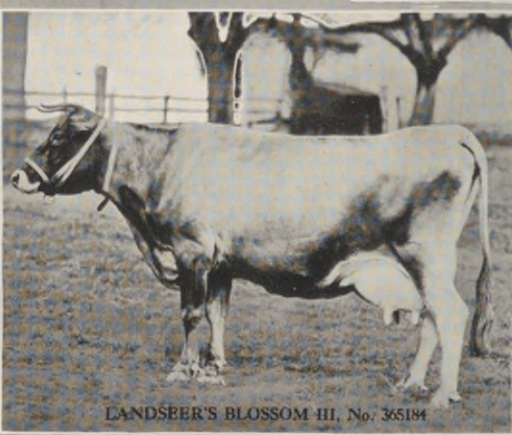
FERN'S DOLLY OF M. B. No. 385846



MERIDALE MERRY PRINCE No. 175281
Herd Bull in Use at Highland Dairy Farms



COMBINATION'S MERRY LASS No. 383397



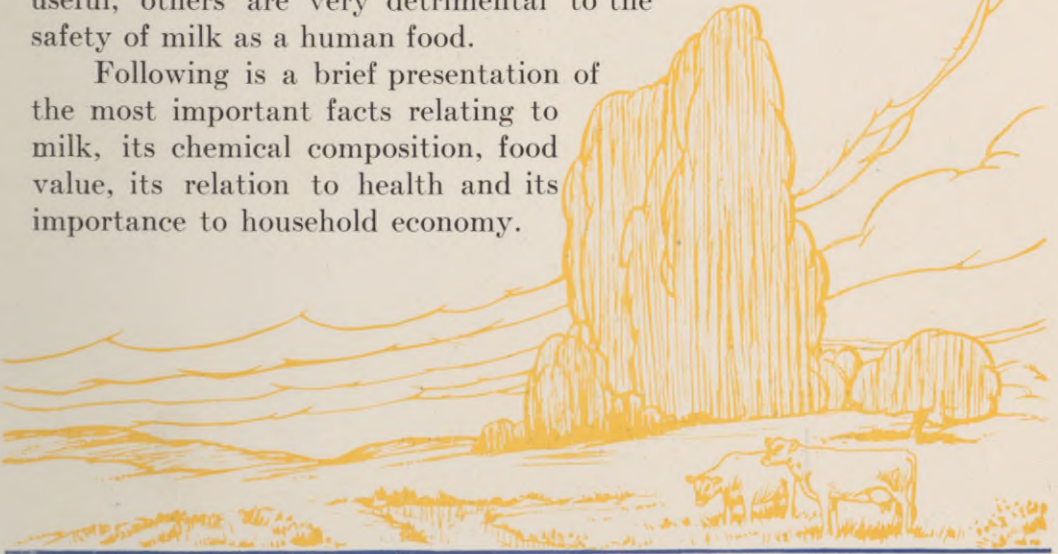
LANDSBER'S BLOSSOM III, No. 365184

HIGHLAND FARMS

Milk

MILK is a whitish, opaque fluid prepared by nature in such a manner as to suit the most delicate digestive organs—the newly-born—convalescents. It is the normal secretion of the mammary glands of animals that suckle their young. Milk is the only food found in nature that contains all the necessary elements to sustain life. It contains these elements in the right proportions and is the easiest digested and most completely assimilated of all foods. To most people milk is milk, no matter where it comes from, how or under what conditions it is produced or distributed. Many milk consumers are of the opinion that any white fluid delivered by a milkman is milk. They fail to realize that milk is the most important human food; therefore, it is very important to know what kind of milk one gets, where it comes from and under what conditions it is produced. Since man has adopted the cow as his foster mother, he is using many methods in handling her milk, which is the greatest of nature's prepared food. Some of his methods are useful, others are very detrimental to the safety of milk as a human food.

Following is a brief presentation of the most important facts relating to milk, its chemical composition, food value, its relation to health and its importance to household economy.



HIGHLAND FARMS

CHEMICAL COMPOSITION OF MILK. Milk varies considerably in its chemical composition. The milk from different breeds of cows varies, and even that of individual animals within the same breed. The environment under which cows are kept greatly effects its composition. The average composition of whole milk as reported by LARSON & WHITE Chemists, is as follows:

Water.....	87.17%
Fat.....	3.69
Casein.....	3.02
Albumin.....	.53
Sugar.....	4.88
Ash.....	.71

The scientist has divided the different elements of milk into groups, according to their functions in the body; namely, total solids, which is the solid portion of milk minus the water, fat and casein. Some have also ascertained the energy producing value of these total solids.

The following table is condensed after LARSON & WHITE and SHERMAN:

Breed	Fat	Casein	Total Solids	Energy Value per Quart
Jersey.....	5.78%	3.02%	15.40%	805.64 Calories
Guernsey.....	5.38%	2.91%	14.90%	797.16 Calories
Ayrshire.....	3.76%	2.46%	12.75%	646.62 Calories
Holstein.....	3.26%	2.20%	11.80%	603.35 Calories





LANDSEER'S BLOSSOM III, No. 365184

FOOD VALUE OF MILK: Food is any substance taken into the body which is used to build new tissue, supply energy and repair the worn tissues. The best food is the kind that gives the body the needed material, in a form which has the least waste. That means food which is easily digested and assimilated, which contains the necessary elements in the right proportions and costs the least per unit of material, such as protein and energy producing properties.

The body needs bone, nerve, new tissue and repair of tissue. It not only needs fuel or energy producing material to keep its machinery at work, but also material to regulate its processes. Milk contains all these necessary materials in the right proportion. It is the cheapest of any food that can be purchased. The casein contained in milk is protein, which is the muscle and tissue builder. It is the most easily digested and absorbed of any of the proteins found in food. Casein also contains mineral matter, which is essential for bone building. The fat and sugar in the milk, supply the energy necessary for the body. Recent investigations have shown that neither animal nor vegetable fats can take the place in the human or

animal body of butter fat. Butter fat contains one of the most essential elements necessary for the growth and development of young children. Milk sugar is a very valuable food for children. It is a source of energy and is easily digested. The water contained in milk is in the right proportion to have these elements properly diluted to suit the digestion of it by infants.

Dr. H. C. Sherman of Columbia University has the following to say concerning milk: "In no other way can the food habits now prevailing, especially in cities, be so certainly and economically improved as by a more liberal use of milk." * * * "A man confined to a BREAD and MEAT diet will show deficiencies, while a man confined to a corresponding BREAD and MILK diet, will go on indefinitely." * * * "We cannot expect a good community dietry if that community uses less than one-half quart per capita per day." * * * "Milk has exceptional value as a food for growth, due to the so-called vitamins." * * * "It is the most important single food for adults."

Dr. McCollum of John Hopkins University says: "The greatest thing that we can do to raise the standard of public health in this country, to increase the span of life and to cause the people of our country to maintain the characteristics of youth for a longer period, is to change the diet and use more milk and less meat."

Dr. Rose of Cornell University says: "It is impossible to escape the conviction that not only is milk a cheap food, but it is a food whose value can hardly be estimated in dollars and cents."

Dr. Howe of Boston says: "The mineral salts and vitamins found in milk are indispensable to sound teeth in children."

Dr. McCollum, one of America's leading authorities on nutrition, has the following to say concerning teeth: "We cannot do much for the teeth of children whose teeth are all erupted, but we can begin now to pave the way for better teeth in the next generation. The best way to accomplish this is to take the type of diet which I have been recommending for several years past. It should include not less than one quart of milk per day for every man, woman and child."

—(*Hoard's Dairyman*).

ECONOMY OF MILK. At the University of Maine experiments were made with milk for the University boarding-house and

it was found: 1st. That an abundant supply of milk decreased the cost without decreasing the acceptability of it to the consumer. 2nd. That the increased consumption of milk was accompanied by a decreased consumption of other food. 3rd. That the increased consumption of milk increased the proportion of proteins in the diet. MILK IS NOT A LUXURY, BUT AN ECONOMICAL FOOD.—(*Larson & White*).

Professor Snyder of the University of Minnesota found that when milk was used in considerable quantities with other foods it increased the digestibility of those foods. Milk at 15 cents a quart is as cheap a source of protein as eggs at 38 cents a dozen, or when eggs are 48 cents a dozen, milk is worth $27\frac{1}{4}$ cents per quart. As for energy value, when milk is worth 15 cents a quart, eggs are worth 20 cents a dozen, and sirloin steak 21 cents a pound.

There are ~~several~~ several different kinds of milk on the market and in many of the large cities, milk is divided into several classes, according to the conditions under which it is produced and handled. These different kinds of milk are usually classified in the following manner:

SELECTED MILK. Milk that is produced under certain sanitary conditions, its bacterial number being limited and the cows inspected by Health Officer.

INSPECTED MILK. This is somewhat similar to the selected milk.



HIGHLAND FARMS

PASTEURIZED MILK. Milk which has been heated to destroy disease carrying organisms in the milk. Of late years, city Boards of Health have required that pasteurized milk be clarified, in order to remove visible dirt.

CERTIFIED MILK. Milk that is produced under the supervision of a Medical Milk Commission.

PRICES OF CERTIFIED MILK. The following table is compiled from the United States market reports as published within the past few months. It shows the retail market in some of the leading cities for certified milk:

City	Average Price per Qt.	City	Average Price per Qt.
Boston.....	27.5c	New York.....	28c
Buffalo.....	30c	New Orleans.....	30c
Chicago.....	25c	Philadelphia.....	29c
Cleveland.....	32c	Pittsburgh.....	25c
Louisville.....	24c	San Francisco.....	25c
Los Angeles.....	26c	St. Louis.....	25c
Minneapolis.....	23c	Washington, D. C.....	29c

Highland Farms Dairy Herd is composed of **JERSEY** cows exclusively. Our milk is being produced under practically the same conditions as certified milk, and in most instances having a higher nutritive value, is selling for 18 cents per quart.

The milk from Highland Farms Dairy is different from any other milk that is delivered to consumers in the city of Greensburg. You may wonder in what way it differs, so we shall endeavor to tell you fully just why and how it differs.

By referring to the 3d paragraph on page 6, you will observe that **JERSEY** milk contains more food value per unit than milk from any other breed of cows.



HIGHLAND FARMS

Our Dairy herd is free from all infectious diseases and is kept in the best of physical condition at all times. The entire herd is tested annually for Tuberculosis, and consumers who patronize us are therefore, protected from one of the most dreaded diseases—"TUBERCULOSIS." In a great many instances, this disease is transmitted to men, women and children through milk which has been produced by cows that have become infected with Tuberculosis. The dissemination of Tuberculosis, through unhealthy herds, is the principle cause for which city Boards of Health require milk to be pasteurized. Our Jersey milk is safest for infants, and adults as well, and the healthy condition of our herd is indicated by the following statement issued by Murray E. Patrick, V. M. D., Greensburg, Pa.:

Murray E. Patrick, V. M. D.,

VETERINARIAN
Pennsylvania Avenue,
GREENSBURG, PENN'A.

December 30, 1921.

This is to certify that I have had the Highland Farms Dairy Herd under my observation and care for the past eight years, and can truthfully say that I have never found any contagious or transmissible disease in the herd during that time.

I also make an annual tuberculin test, and have never found a reactor in this herd.

(Signed) M. E. PATRICK



CHAMPION'S TULIE No. 370397

HIGHLAND FARMS



View of Highland Farms Dairy Buildings

We not only practice up-to-date methods in the way of production, but also in the distribution of our milk. There are a number of factors involved in producing good, sanitary milk that are of the utmost importance, but unfortunately, most of these factors are underestimated by many milk producers and distributors—even by a majority of the consumers themselves. Some of the most important factors affecting the production and distribution of good, sanitary milk are as follows:

Physical condition of animals.	Methods and equipment.
Physical condition of attendants.	Sterilization.
Food supply and methods of feeding.	Milk House.
Water supply.	Ice.

PHYSICAL CONDITION OF ANIMALS: No clean wholesome milk can be produced by a cow that is not in perfect physical health. A cow that is in poor condition is not capable of producing normal milk, therefore, it is important to see that a cow whose milk is to be used for human consumption be kept in perfect physical condition. We use milk only of such animals as are in perfect health. As soon as an animal is noticed to show any signs of illness, her milk



Also Showing Part of the Milking Herd

is discarded regardless of the cost or loss necessitated by its destruction.

PHYSICAL CONDITION OF ATTENDANTS: It is of little value to have healthy cows and allow them to be exposed to an attendant who is not in perfect health. The practice at Highland Farms Dairy is that as soon as a person, who attends to the milk or animals, shows any indication or even suspicion of being a factor to affect the purity or safety of the milk, he is suspended until we are positively certain that there is no danger of affecting the milk.

FOOD SUPPLY is of considerable importance in clean milk production. It is necessary that the animals not only receive clean wholesome food, but that the food ration be properly balanced, so as not to disturb the digestive system of the cow; also to see that their food contains the proper elements for normal milk production. Food will affect the milk in different ways. It might affect the flavor of the milk, its physical properties, and it might also slightly affect its chemical composition. The food for our herd is carefully selected and properly adjusted for normal milk production.

HIGHLAND FARMS

METHODS OF FEEDING have a direct bearing on the flavor of the milk as well as on its purity. At our dairy all feeding is done immediately after milking, for by so doing, we avoid the dust and odor that would be stirred up while the cows are eating.

THE WATER SUPPLY is one of the most essential factors in the production of pure, sanitary milk. Too many farmers pay very little attention to the water for their stock. On many farms the dairy cow gets her drinking water at an open spring in the pasture field, where the earth gets trampled up so that it is scarcely less than a mud hole. In many instances the water supply is from an old well or spring near the barn. Close to it there is often a large manure pile, which incidentally drains into that well or spring, whichever the case may be. Sometimes cattle are watered from a well in the barnyard. Many epidemics in cities supplied with milk from different sources have been traced directly to the careless and bad water supply at some dairy. Highland Farms Dairy gets its water from the same source as that used by the people of Greensburg, as we have a direct connection with the mains of the Westmoreland Water Company. The water is placed in front of each cow in individual automatic drinking bowls, so that none of our dairy cows are compelled to drink water that might have been polluted or contaminated in any manner whatever.



Interior View of Highland Farms Dairy Barn, Showing Stanchions and Individual Drinking Cups, Providing Fresh Water for Each Cow. The Floors are of Concrete

HIGHLAND FARMS

METHODS AND EQUIPMENT. There is no other factor that is so responsible for the cleanliness of milk as the condition under which it is being produced, or the methods applied in its distribution. Milk has a peculiar nature of becoming easily contaminated through the slightest contact with any object which may carry a contaminating factor, be it odor, flavor or disease-producing organisms. It is impossible to produce clean milk in a filthy cow stable, wherein rubbish of all kinds and excrements of the stable inmates are left to accumulate for weeks, or even days. Our stables are cleaned twice each day. No other animals than milking cows whose milk is suitable for use are kept in our stables. Clean straw is used for bedding the cows daily. The floors of a cow stable are, in many instances, the cause of milk contamination. The floors in our Dairy Barn are of cement. These floors are swept twice daily, and thoroughly washed and scrubbed weekly.

VENTILATION is a most decided factor in sanitary milk production. Cows, in order to keep in perfect health must have plenty of fresh air, which must enter the stable without causing a direct draft on the animals. It is impossible to produce milk which will be free of stable odors without having the stable properly ventilated. Our Dairy has a thorough ventilating system whereby the animals get plenty of fresh air without being exposed to drafts or cold, consequently the atmosphere of the stables is easily controlled.



HIGHLAND FARMS

SUNSHINE is one of the greatest enemies to bacteria of all kinds, hence it becomes a very essential factor in the production of sanitary milk. Our cow barn is built so as to allow plenty of sunshine to enter through its numerous windows and doors. In the summer these doors and windows are properly screened to prevent flies and insects from entering the barns.

WHITE-WASH not only purifies the atmosphere in the buildings, but also indicates cleanliness. The inside of our dairy barn is white-washed weekly, in order to maintain a high standard of cleanliness.

Under natural conditions animals usually keep themselves clean. When they are left out-of-doors to take care of themselves, we seldom, if ever, find one that is not clean. They will rub themselves against the trees or fences, in order to keep the pores of their skin well open and their hair well brushed. When animals are kept under domestication, in order to maintain them in good health and in order to produce clean milk, they must be well cared for. Our dairy herd is groomed and brushed daily, for only by so doing can we keep our cows clean, in good health, and produce sanitary milk.



View Showing How the Cows are Groomed Daily at Highland Farms

HIGHLAND FARMS



View at Highland Farm Dairy Showing How the Cows are Washed
Before Each Milking

The cows' udders and flanks are usually one of the main sources of milk contamination. On most farms where milk is produced, the milker goes to milk with the least thought of the filth on the cows' udders. At our dairy, each cow's udder is thoroughly washed and dried before milking. The cows are chained up during the milking period, so as to avoid the unnecessary lying down and getting up while the milking is being done. By so doing, we eliminate the dirt and dust that would undoubtedly find its way into the milk pail.

No man can produce clean milk with dirty hands and filthy clothes, which he wears around the farm or stock. On our dairy, every milker must wash his hands with soap and dry them on a clean towel before he starts to milk. The men wear white overalls that are used exclusively for milking. These overalls are laundered three times each week.

STERILIZATION. All the utensils used in handling milk, such as cans, pails, strainers, bottles, brushes, etc., are thoroughly washed and sterilized by steaming them before they come in contact with the milk. Sterilization is the controlling factor in sanitary



Highland Farms Milkers Ready to Begin Work

milk production. Without it, all efforts to produce clean milk of a low bacterial count are nullified.

MILK HOUSE. Immediately after the milk is extracted from the cows it is taken into the collecting room where it is strained through a double layer of sterilized cheese cloth into a large container. It is then removed to a milk house, which is apart from the barn. Here the milk is put over a metal cooler in order to remove the animal heat from it as quickly as possible. After the cooling process is completed, the milk is again strained through absorbent cotton into a large tank, from which it is bottled by an automatic machine. All possible chance of contamination is eliminated after this final handling process is completed.

ICE. During the summer months, the dairyman has many difficulties. After all the care taken to produce a high grade, sanitary milk, the temperature to which it is exposed during the period of delivery, is liable to undo all the hard and efficient work of the dairyman. In order to deliver our milk to the consumer in good condition, it is iced immediately after bottling, thus the milk is protected from the high temperature of the atmosphere.



Interior View of Highland Farms Dairy Barn Showing Modern Equipment
and Sanitary Milking Conditions

HIGHLAND FARMS MILK VS. PASTEURIZED MILK

We previously stated what pasteurized milk was. Most cities require that all milk sold should be pasteurized. With this order the health authorities are attempting to safeguard the city milk consumer from infectious diseases which might be carried in milk, and especially to prevent the transmission of Tuberculosis. This is a very important regulation as far as the city milk supply is concerned. The milk which reaches the city usually comes from unknown sources. The sanitary conditions under which most of it is produced are of a rather doubtful character and are beyond the reach of the city health officer, hence these orders and regulations. It will not be out of place for us to know what authorities say regarding pasteurized milk.

Dr. Melvin of the Bureau of Animal Industry of the United States Department of Agriculture says: "All milk of unknown origin should be placed in class three and subjected to pasteurization."

Dr. Milton Rosenow, Director of the Hygienic Laboratories, Public Health and Marine Hospital, Washington, D. C., who is

one of the leading advocates for the pasteurization of milk, says: "Pasteurized milk must be handled at least as carefully as raw milk, if not more so." * * * "It must be quite evident to anyone who gives the matter thoughtful attention, that the heating of milk like the use of antiseptics, is an expedient rather than an ideal procedure." * * * "Heating improves bacteria-laden and dirty milk, but clean milk is



View Showing Sanitary Methods of Cooling and Bottling Highland Farms Milk

the end we must seek." * * * "PURE MILK IS BETTER THAN PURIFIED MILK."—"Pasteurization cannot atone for filth." * * * "Milk should be produced under clean conditions and kept clean and it would not have to be purified." * * * "The average commercial milk of large cities is not a safe food." * * * "Heat kills the ferments in milk, which play a useful role in digestion and metabolism." * * * "It is claimed that the heating of milk renders a part of the phosphates insoluble, and that this change favors rachitis in children." * * * "All are agreed that if the child must be artificially fed, it is best to use fresh, pure milk." * * * "No known process will make bad milk, good milk." * * * "It is by no means claimed that heated milk is the ideal to be attained. On the contrary, we want good, fresh milk that needs no heating. Physicians who have had large experi-



View of Buildings at Highland Farms Dairy. The Brick Building at the Right of the Barn is where the Milk is Cooled and Bottled

ence in the care and feeding of infants have a prejudice against the use of heated milk for prolonged periods." * * * "The commercial pasteurization of milk leaves much to be desired." * * * "A reduction of high infant mortality may be accomplished without the heating of milk."

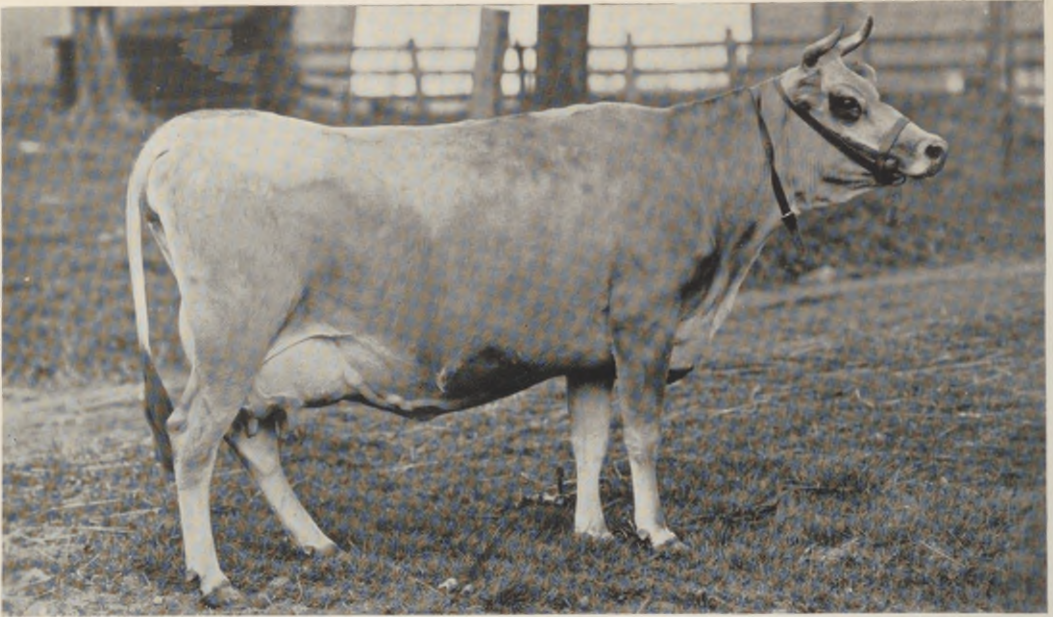
Barthel says: "A very great danger lies in the use of pasteurized milk, particularly for infants."

Dr. McCollum says: "It does not render milk perfectly harmless. The public should insist upon having its milk supply produced under hygienic conditions."

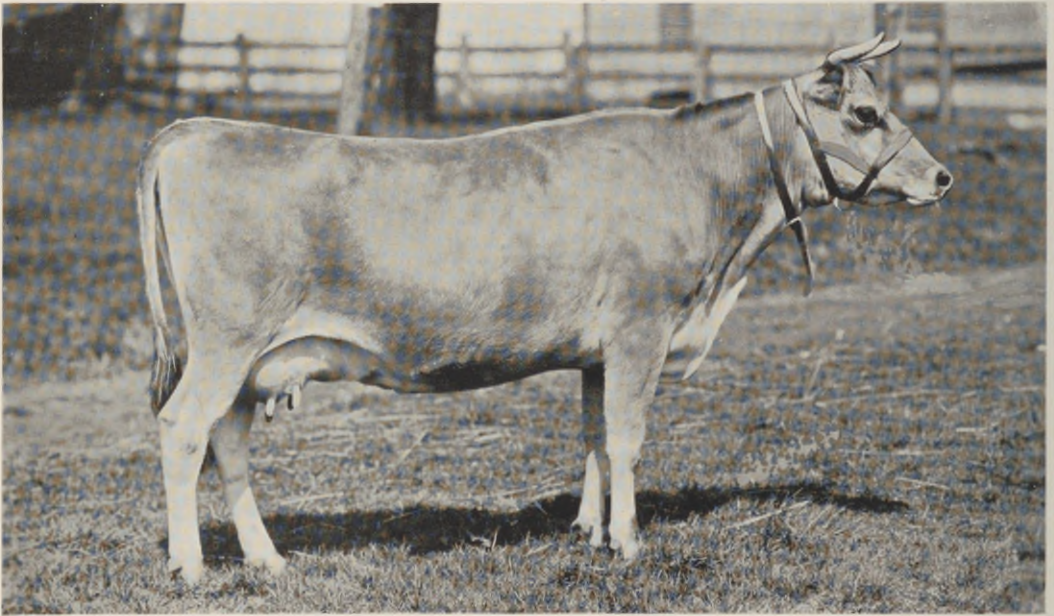
Ward says: "Experienced specialists in Pediatrics vehemently object to the long continued use of heated milk for infant feeding."

In a recent report of the American Health Association on pasteurized milk, Dr. Hess says: "Pasteurized milk which has been heated to 145° Fahrenheit for twenty minutes at the plant of a New York dealer was used. Several children developed mild but recognizable cases of scurvy at this time, while others in the same ward, and fed on identical diet, did not contract the disease. Raw milk was then substituted for the pasteurized, all the conditions remained the same, and in two weeks the scorbutic symptoms wholly disappeared."

HIGHLAND FARMS



COMBINATION'S MERRY LASS No. 383897



FERN'S DOLLY OF M. B. No. 385846

HIGHLAND FARMS

Larson and White record the following objections to pasteurized milk:

1. "It promotes carelessness and discourages the production of clean milk.
2. It produces chemical changes in milk which renders it less easily digestible.
3. Desirable lactic-acid bacteria are killed, while some undesirable are not.
4. Germs are killed, but their toxic by-products remain.
5. Pasteurization covers defects in milk."

Highland Farms Dairy produces pure milk from healthy Jersey cows, therefore, it needs no PASTEURIZATION to purify it. We practice sanitary methods and keep foreign matter out of our milk, hence, it needs no CLARIFICATION.

Highland Farms Jersey Milk is neither PASTEURIZED nor CLARIFIED, but it is being distributed in its NATURAL form to an ever increasing number of consumers.



Jersey Calves—Some Future Milk Producers at Highland Farms

HIGHLAND FARMS

KEYSTONE PRESS
PITTSBURGH, PA

caps for each milking time. The milk of each cow is weighed and recorded. Seventy-five to eighty gallons are obtained daily. The milk is strained through a double layer of cheesecloth before leaving the barn. It is then taken to the dairy where it is run through a layer of absorbent cotton and another double layer of cheesecloth into the bottling machine. It is cooled by running city water just before being bottled. The bottles are all sterilized with steam under forty pounds pressure for thirty minutes.

The Highland Farms Dairy operates without a system of pasteurization. The manager, Mr. Edward Tanskey, believes milk should be protected against any possibility for foreign particles to enter it. If such is efficiently carried out, he maintains that pasteurization is unnecessary.

Each cow's milk is tested for fat every month. The average is 5.2 - 5.4% by the Babcock tester. No other ingredients are sought. The milk is not certified. The evening's milk is separated by a DeLaval separator and the skimmed milk is fed to the calves. The dairy operates two milk wagons by which the bottled milk is distributed to the consumer.

Every effort is being made to eliminate all possibility of contamination and the Dairy is operated with consideration for the health of the customer.

City Dairy:

The Greensburg Dairy Products Company is located at the junction of Mt. Pleasant Street and Highland Avenue. Approximately three hundred gallons of milk are brought here daily from the farms near town. The company has no supervision of the cows from which the milk comes. The milk is emptied into a tank scales and weighed. Then it is run into a receiving tank from which it is directed into a pre-heater which heats the milk from eight to ninety degrees Fahrenheit. Next the milk is directed into a DeLaval clarifier which works on a centrifuge system, removing the gross foreign material from the milk. From the clarifier, the milk is put into a Pasteurizer (Positive Pasteurizer and Cooler of J. B. Cherry and Company), after it is cooled. The milk is first cooled by water, then by brine through a system of coiled pipes.

The milk is received into the top of a bottling machine from which it passes into bottles underneath, the bottles finally being capped two at a time by the bottling machine. Throughout the entire process none of the milk is touched by hand.

This system, like that employed by the Highland Farms Dairy, is a good attempt to protect the consumer. However, this company should exact a guarantee from the farmers concerning the health of the cows and men handling



Dairy Products Company, Greensburg's city dairy facing on Mt. Pleasant Street. This Plant handles approximately 300 gallons of milk every day. Recently the management has installed an ice-cream system for the purpose of furnishing the patrons with this cooling delicacy.

the milk. Further precautions to protect the milk from filth and incidental dirt ought to be taken.

None of the milk in Greensburg is certified. To establish this is a duty indicated to the Board of Health.

SANITARY NUISANCES

SANITARY NUISANCES

The city is singularly free from undesirable odors, since the council started a clean up of privies, manure piles, filthy stables and cess pools and dumps. At present temporary conditions may occur around meat markets, produce houses, livery stables and garages, but these are generally quite properly looked after.

The street cars and automobiles have given rise to dust along the streets, during dry spells. The city street department has two water wagons which are used too seldom, according to families living along the streets involved. The Lincoln Highway passes through Greensburg as Pittsburg Street, east and west. This is the cause of much dust being raised all along the street in dry seasons, for traffic is quite heavy.

The Board of Health is strict in its jurisdiction over any accumulation of rubbish or concentration of filth or lack of proper steps to remove garbage, ashes and dirt. So the town is, as a rule, well protected and kept in good condition in this particular.

Periodically, campaigns against flies have been advocated by the newspapers of the town. Mosquitoes have never occurred in such numbers as to be obnoxious to the community welfare. No anopheles have been reported in the district, to date.

Rats and vermin have not caused much concern. They are present around the barns, livery stables and outhouses in some parts of the town. No measures have as yet been organized to exterminate them.

The Board of Health keeps a strict supervision of conditions existing around stables. All manure piles must be walled off. Competent means for removal of rubbish and waste materials around the stables and livery barns is insisted upon by the health authorities. Since the stables are being removed to provide room for garages, the evils coincident with them are rapidly diminishing. The writer in surveying the town, found no flagrant conditions existing around stables that called for immediate action.

Smoke from factories south of town has not seriously bothered the citizens involved. It is true that the atmosphere is not very good because Greensburg is located in the coal district of Pennsylvania. Nevertheless, the factories near the town do not imperil the health of the community pouring smoke out upon it. Soot restrainers are used by some of the factories.

Unnecessary noises are prohibited. Cut-outs used by automobilists are not allowed in the city limits.

Piggeries and slaughter houses are likewise prohibited within the city limits. No dealer in live stock is allowed to slaughter cattle, calves, sheep or pigs in the city.

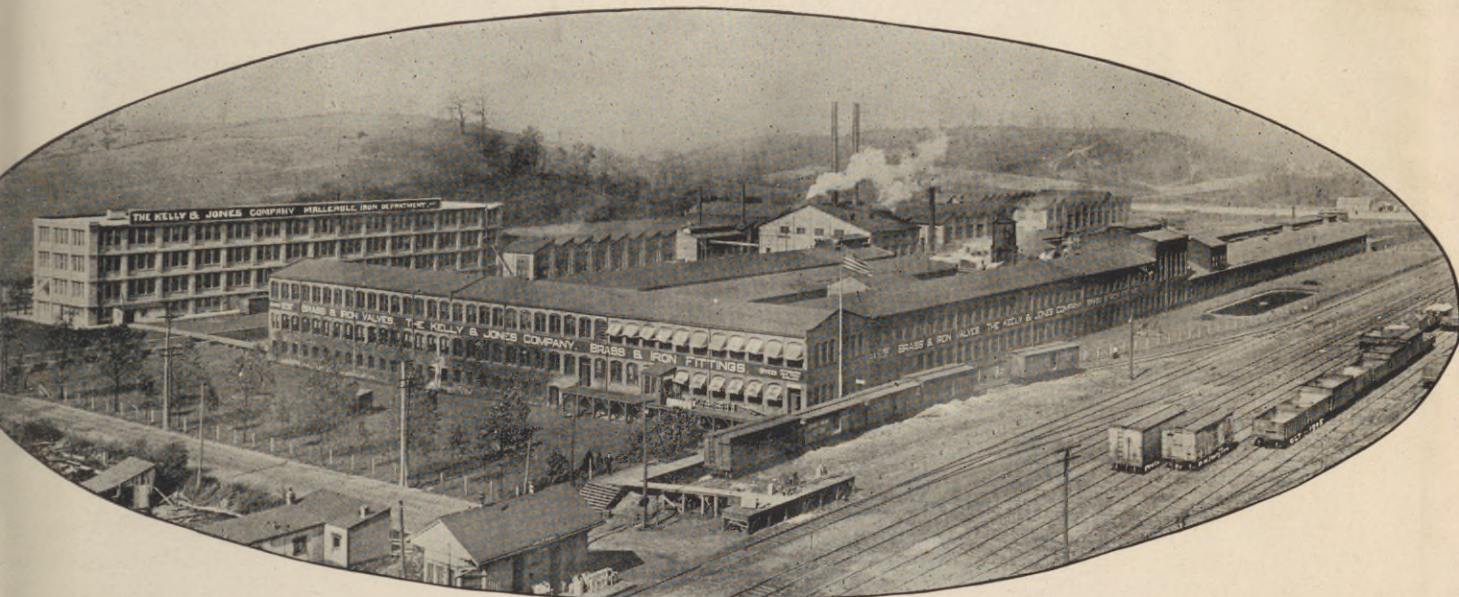
Legal Definition:

The legal definition of a nuisance is "Any act or condition existing within the limits of the city, which may, by sight, hearing, odor or other existence, affect or jeopardize the health of the community therein".

Legal restraint is resorted to in order to remedy said condition. In 1921 there were reported 1821 nuisances to the Secretary of the Board of Health.

INDUSTRIAL HYGIENE

THE KELLY & JONES COMPANY
MANUFACTURERS OF
BRASS AND IRON FITTINGS. ETC.,



WORKS LOCATED AT GREENSBURG, PENNSYLVANIA

Offices in

New York
St. Louis

Chicago
Denver

Pittsburg
San Francisco

Kelly and Jones Manufacturing Company, a panoramic view of the entire Plant. The railroad to the right is the Southwest Branch of the Pennsylvania.

INDUSTRIAL HYGIENE

A visit was made to the Kelley and Jones Plant one mile south of the city. The type of work is the manufacturing of valves, steel fittings, cast iron, malleable iron, steel and brass. Thirteen hundred men are employed in the plant. In the office there are employed thirty-five women and thirty-one men. The plant covers an area of approximately twenty-five acres.

The plant utilizes ordinary daylight with electric lamps for dark days. The windows are huge steel framed, small-glass structures, insuring ample light and ventilation. Electric fans are also found at points necessary. There is no regularly installed vacuum system of ventilation in the main plant. There are three cleaning rooms with one hundred men in each room. Here it is necessary for the welfare of the workers to keep a clean current of cool air going, and a vacuum system has accordingly been established. Likewise in the galvanizing room, where thirty-five men are employed, a vacuum system is used. Men working in the cleaning rooms and in the galvanizing room are all required to wear goggles to protect their eyes.

In every department, for every twenty-five men up to one hundred and twenty-five, there is one toilet; above one hundred and twenty-five one toilet is furnished for every



The Kelly and Jones Manufacturing Company. The picture shows the office building and the well kept lawn. The grey concrete building shown to the extreme left is a recent addition to the huge Plant. This industry furnishes employment for approximately one thousand three hundred men and women .

forty-five men. No recreation rooms are maintained, but each department has a cloak room where the men change their clothes.

There is a safety inspector present all the time. It is his duty to report anything he sees that may jeopardize the safety or life of any individual in or near the plant. A committee of the workmen inspect the plant once a month and make recommendations to the General Safety Committee, the latter named being composed of the Superintendent, Assistant Superintendent, Treasurer and Assistant Treasurer of the Company. The final reports are inspected by the State Inspectors employed by the Government.

The Company belongs to the National Safety Board. Bulletins are posted in the plant advising workmen about various precautionary procedures to be taken.

There is no periodic physical examination of the employees but each applicant for a job is examined by the Company physician, Dr. C. C. Porter, before he is employed.

In the various departments each foreman has an emergency kit; every injury, no matter how slight is required to be reported to the hospital. A duly registered nurse is on duty all the time through the working hours, 7:00 A. M. to 4:30 P. M. The Company doctor is present each morning for two hours, and will report at other times for emergency calls. An eye specialist is also appointed, but the employees are sent to his office for he visits the plant only for emergency cases.

OFFICE OF
THE KELLY & JONES CO.
 MEDICAL EXAMINER'S CERTIFICATE

NAME ADDRESS DATE

CHECK No. COMP. No.

- | | | |
|-----------------------------|---|--|
| 1 General development | 1 | |
| 2 Head | 2 | |
| 3 Face and neck | 3 | |
| 4 Hearing | 4 | |
| 5 Eyes | 5 | |
| 6 Height | 6 | |
| 7 Weight | 7 | |
| 8 | 8 | |

- | | | | |
|--------|---|------------------------|-----------|
| Lungs: | { | (a) Inspection | (a) |
| | | (b) Palpation | (b) |
| | | (c) Percussion | (c) |
| | | (d) Auscultation | (d) |

- | | | | |
|---------|---|------------------------|-----------|
| 9 | 9 | | |
| Heart: | { | (a) Inspection | (a) |
| | | (b) Palpation | (b) |
| | | (c) Percussion | (c) |
| | | (d) Auscultation | (d) |

- | | | |
|-----------------------------------|----|--|
| 10 Arteries and circulation | 10 | |
| 11 Abdomen | 11 | |
| 12 Hernias | 12 | |
| 13 Arms and fingers | 13 | |
| 14 Legs and feet | 14 | |
| 15 Spine and joints | 15 | |
| 16 Gain or loss in weight | 16 | |

17 Have you received medical or surgical treatment within the last two years?

18 Who is your family Physician?

Remarks

.....

.....

.....

Date

The Plant Hospital is a well equipped, white painted three room apartment. A receiving room and a first aid room and a bed room constitute the service. The necessary medicants and instruments are present and ready for immediate use. Approximately thirty-five cases are handled each day.

The Company encourages cooperation between the managerial staff and the employees in all matters pertaining to public and individual safety. The plant is kept clean, well lighted, well ventilated and in order. It is operated on the principle that healthy and satisfied employees do the best work.

H O U S I N G

HOUSINGSanitary Condition of one Tenement:

Four squares west from the center of the city just off West Pittsburgh Street is Moore's Alley. Here are found the homes of the Italians of the city.

The tenement visited faces east on Moore's Alleyway. It is a low two-story red brick building with nine separate apartments. Each section has two front windows downstairs and a door opening into the street. Upstairs are two small windows. Downstairs are found, in each house, a front room, and a kitchen in the rear. Upstairs are two rooms, one front, one rear. Each house has a small garden, approximately 35 x 15 feet, to the rear. Nine privies are found beyond the gardens from the tenement. These are kept fairly clean, so far as possible, by the women. The inhabitants appear to be industrious. The gardens are worked, the front and back porches are kept scrubbed, the floors in the ones visited were clean. The inhabitants are, as a rule, law abiding foreign citizens.



Moore's Alley. The picture above shows the street with the tenement facing thereon. Each apartment has a small front porch. The lower view illustrates the rear of the tenement. The inhabitants are industrious and work their gardens diligently. To the extreme left are located the out-houses, not seen in the lower picture because of the extensive foliage.



20

INFECTIOUS DISEASES

The Board of Health requires notification of the following diseases: -

- | | |
|--------------------------|------------------------|
| Scarlet fever | Measles |
| Diphtheria | Mumps |
| Small pox | Typhoid fever |
| Chicken pox | Influenza |
| Pertussis | Antinomiasis |
| Erysipelas | Policystitis |
| Cerebrospinal meningitis | Ashtat |
| Cholera | German measles |
| Epidemic dysentery | Glanders |
| Leprosy | Ophthalmia neonatorum |
| Malarial fever | Paratyphoid fever |
| Pellagra | Puerperal fever |
| True pneumonia | Rabies |
| Scabies | Relapsing fever |
| Tetanus | Trichiniasis |
| Typhus fever | Tuberculosis |
| Unin | Occupational diseases. |

IN F E C T I O U S D I S E A S E S

In 1921 the following cases were reported: -

Diphtheria	29
Scarlet fever	35
Typhoid fever	45
Erysipelas	2
Chicken pox	4
Measles	57
Mumps	3

Quarantine Regulations:

As soon as a contagious disease is recognized by a physician, he is required to notify the secretary of the Board of Health or the doctor of the Board.

INFECTIOUS DISEASES

The Board of Health requires notification of the following diseases: -

Scarlet fever	Measles
Diphtheria	Mumps
Small pox	Typhoid fever
Chicken pox	Influenza
Pertussis	Actinomycosis
Erysipelas	Poliomyelitis
Cerebrospinal meningitis	Anthrax
Cholera	German measles
Epidemic dysentery	Glanders
Leprosy	Ophthalmia neonatorum
Malarial fever	Paratyphoid fever
Pellagra	Puerperal fever
True pneumonia	Rabies
Scabies	Relapsing fever
Tetanus	Trichiniasis
Typhus fever	Tuberculosis
Uncinariasis	Yellow fever
	Occupational diseases.

In 1921 the following cases were reported: -

Diphtheria	29
Scarlet fever	35
Typhoid fever	45
Erysipelas	2
Chicken pox	4
Measles	57
Mumps	8

Quarantine Regulations:

As soon as a contagious disease is recognized by a physician, he is required to notify the Secretary of the Board of Health or the doctor of the Board.

A quarantine sign is put up and this may be removed by no one except the Secretary of the Board of Health or one authorized by him. Each disease has a specific time of quarantine but this has at times been modified. The case must be pronounced incapable of infecting others by the physician in charge or by the physician of the Board. Then the Secretary will direct that the room or entire home be fumigated and the proper disinfection be carried out. Disinfection is carried out with formaldehyde, creolin, carbolic acid, or bichloride. Fumigation is accomplished with a formaldehyde lamp in the room properly sealed.

To prevent the spread of tuberculosis, a vigorous educational campaign has been waged, the known cases are appropriately cared for, milk and all other possible sources are examined for the bacilli and the proper measures are taken. Isolation of active cases is advised. A community nurse instructs the more unfortunate families in sanitary precautions to be followed. A tuberculosis clinic is held every Wednesday afternoon at the Hospital.

If another disease were to become prevalent, the Board of Health organizes a strict quarantine regime, and searches for the source of the infection. The proper laboratory tests are made for diagnostic purposes. To date no such occasion has arisen.

Menace of Social Diseases Discussed at Meeting Here

Fourteen women are confined in the tower of the Westmoreland county jail at the present time, under a health quarantine established by the State Department of Health which is waging a determined war to stamp out venereal diseases.

Miss Margaret Flynn, state health nurse, assists Dr. J. S. Anderson, in conducting a clinic for social diseases in Greensburg, with an average of 300 boys and girls, men and women, in attendance each month. Men of 60 as well as children of 13 and 14, patronize the clinic.

Facts such as these were given by John C. Funk, technical assistant attached to the G-U division of the Pennsylvania State Department of Health, in a lecture before a good sized audience in the auditorium of the Y. M. C. A. building last evening. Mr. Funk's lecture preceded the showing of a picture representing the state department's effort to combat prostitution in all its forms and the diseases which follow in its train.

Facts not particularly pleasant, but facts vitally important as the basis for intelligent work, were recited by Mr. Funk.

"It is known that a boy was five times safer in the old regular army—always considered hard boiled—at the outbreak of the war, than if he had been living in Greensburg," declared the speaker, in a way that challenged interest at the very outset of his remarks. "Ninety per cent of all prostitution is practiced outside the so-called 'red light' districts," continued Mr. Funk. "Prostitution takes the form of young girls on the streets, the semi-respectable girls who go out in automobiles to secluded spots on the highways, and the always recognized type in the houses of a red light district. Statistics show that 60 per cent of the young girls of this community has had, or will have, a venereal disease."

Speaking of the automobiles as a destructive force, with regard to its

use in illicit love making, the speaker said that the State Department of Health cannot control automobile parties, but it has deputized the 450 members of the State Police department of Pennsylvania, and given them authority to search the highways, and to arrest the men and women engaged in acts of prostitution.

The Pennsylvania Department of Health has 36 to 40 clinics for combating venereal diseases scattered over the state, and one of them is in Greensburg. The aim of the department is not only to care for patients in the hospital, but to control the cases by isolating those cursed with the disease, from others who might become contaminated.

Men and women afflicted with venereal diseases are not detained in jail because they are criminals, but because they are a health menace, and they are confined in the Westmoreland county jail because, in this county, the detention hospital happens to be in the jail.

After a patient is pronounced no longer a menace to the community, she is not permitted to go free, but is sent to some institution for a year, or a year and a half, during which time she is given a chance to live up to higher ideals.

The speaker told startling facts. He said: "One-third of all cases of infant blindness in Pennsylvania is due to venereal diseases in parents. Twenty per cent of all the dollars paid by the tax payers go to support institutions made necessary because of syphilis."

At the close of Mr. Funk's address, Attorney John W. McFayden of Latrobe, attorney for the department was called to the floor and made an earnest address, urging community cooperation in cleaning up disease conditions in the country. Mr. McFayden spoke of the laymen's organization which already exists in Latrobe and told of the desire to form such a laymen's organization in the county seat.

A clipping from the Greensburg Daily Tribune relating to the activity of the authorities in the pursuit of a campaign against venereal disease.

A clipping from the Greenburg Daily Tribune relating to the activity of authorities in the pursuit of a campaign against venereal disease.

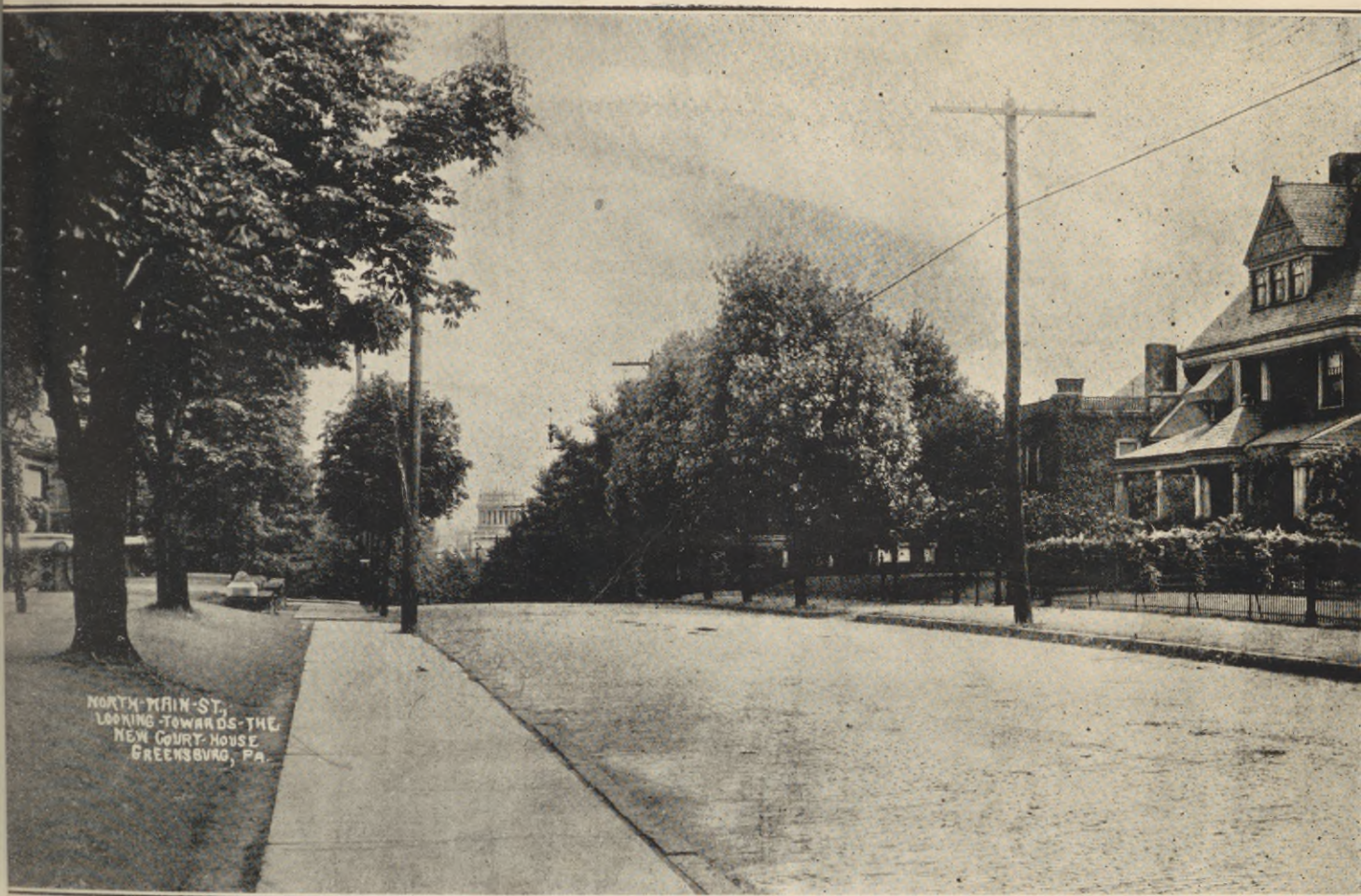
Venereal Diseases:

Dr. J. S. Anderson is in charge of the venereal clinic held at the Westmoreland Hospital on Wednesday afternoons. Each case of venereal disease is required by law to be reported to the proper authorities, by the attending physician.

Each new guest at the County Jail is examined, a Wassermann test and prostatic or a cervical smear made. In the first six months of 1922, two hundred and fifteen inmates of the jail, from Westmoreland County, were examined. Dr. Anderson states that 6 - 8% of these are from Greensburg. Seventy-four gave positive tests for syphilis while thirty-five were positive for gonorrhoea.

At the Hospital clinics held Wednesday afternoons, the highest number of Salvarsans given was fourteen.

S C H O O L S



VIEW FROM THE SCHOOL GROUNDS

Main Street looking due south from the school grounds on Academy Hill. Note the dome of the Court-house seen in the distance.

SCHOOLS

Greensburg has seven grade schools, one grammar school with eight teaching rooms, and one high school. The Grammar School, with the Fourth Ward School, occupies a small city block, in the Fourth Ward, bounded by Third Street, Euclid Avenue, Fourth Street and School Street. The Grammar School building is a recently constructed brown brick structure with spacious halls and well equipped teaching facilities. In the basement, situated on the southeast corner, is a room for mechanical drawing. There are eighteen desks where the boys are taught the elements of this art. On the southwest corner is located the wood work room for the classes in manual training. There are work benches, each fully equipped with necessary tools for the work. It may be stated here that the Domestic Science Department is located in the Fourth Ward Building, adjoining the Grammar School Building. The northwest corner room in the basement of the Grammar School is devoted to larger saws, drills, etc., used in the more difficult and advanced procedures in wood work.

The northeast corner basement room has the huge furnace for heating purposes, and the large fan for ventilation of the entire building.

The first floor of the building has a spacious hallway with openings between the rooms, each room occupying one corner of the building. Each room contains facilities for



Two views of the splendid new Grammar School. This is located in the center of the town just off West Third Street. It is modern and complete in every way.



teaching forty-eight pupils. Seven large windows open into each room, as also a large door opens out into the central hall of the building. Each room has one cloak room for boys and one for girls where are found individual lockers for every student, and a toilet room is connected with each locker room.

Large slate blackboards are on the walls of each room. The seats are so arranged in the rooms that light from the windows comes to each seat on its left and its rear aspects. Besides this, each room has a system of chandeliers with electric lights.

The ventilation system of the building is most efficient. A huge electric fan in the basement directs a current of cool air through large shafts incorporated in the thick walls and opening on the floor of each room. High on the wall of each room is another shaft opening by which the impure and hot air is directed out of the room. The temperature of the air can be controlled throughout the entire building.

Surrounding the building is a large lawn where the children may play. There is not, however, any organized or regularly appointed and equipped playground for this school.

The location of the school is ideal, being practically in the center of the city, thus accessible to students from all parts of the town. This is desirable since there is but one Grammar School in the city.



Greensburg High School, located northwest of the city limits. This Greensburg High School with a capacity of five hundred students is now exceedingly cramped for space. The campus now holds two improvised wooden structures used for teaching.

Besides the public schools in Greensburg, Pa.
Parochial School located on Academy Hill in Greensburg, Pa.



In the rooms of the Board of Trade. Following the

of each child, the proper recommendations are

St. Joseph's Academy, located northwest of the city limits. This
large institution operated by the Catholic Church is one of the leading
places of higher learning in the State of Pennsylvania.

Besides the public schools in Greensburg there is a Parochial School located on Academy Hill on Main Street near the High School Building. Here, Catholic children are trained through the lower grades and up until they are properly trained for High School.

In addition to this, just northwest of the city limits, is located Seton Hill College for girls, and St. Joseph's Academy, a preparatory school. These institutions train girls and young ladies from all parts of the State, as well as from adjoining states. The college grants the Bachelor of Arts degree to students satisfactorily completing the course of training.

Medical Inspection of School Children:

Once each year, usually in the spring, all the school children are examined by a corps of physicians under the direction of Dr. John S. Anderson. This is conducted in the rooms of the Board of Trade. Following the examination of each child, the proper recommendations are sent to the parents of children found defective in one way or another. In this way bad teeth, enlarged tonsils, faulty nutrition, etc., are given proper attention.

Diseases for which Children are Excluded from School:

Children are excluded from attendance at school for the following diseases: -

Measles
Mumps
Whooping cough
Chicken pox
Small pox
Scarlet fever
Diphtheria
Erysipelas
Impetigo
Suspicious but unrecognized rashes
Bronchitis
Trachoma
Pink-eye
Tonsillitis
Scabies
Ringworm
Lice
Lupus

M I S C E L L A N E O U S

MISCELLANEOUS

Greensburg has three large provision stores, fifteen meat markets and five cold storage plants. Armour & Company operate the large cold storage plant in the western part of the city. Wilson & Company also have a plant. The smaller storage plants are operated by Quint's market, Trout's market and Rulino's.

The large provision companies have their own inspectors who visit the plants at stated intervals throughout the year. These officials are, in turn, held accountable by the State authorities.

The meat markets and smaller provision establishments are required by law to keep the food products screened in so that thoughtless prospective buyers will not handle the articles. Large refrigerators are present in each of the above mentioned houses in which the bulk of the products are kept, to be brought forth as needed.

There are ten drugstores in the city. Eight of these are located in the business section and two in the outlying districts. Each store is fully equipped with a soda fountain. Thomas' Drug Store, located on South Pennsylvania Avenue, does not maintain its soda fountain during the winter months. The soda fountains are so constructed that it is

possible, even easy, to keep its activities going on strictly sanitary lines. The young clerks seen at each of the fountains showed ill kept finger nails, and in three of the establishments clean white coats and aprons should have been asked for.

During the last five years a Greek colony has been set up in the city. The most prosperous citizen of the group is Mr. M. Manos, who has built two large motion picture houses, and a confectionery store on West Otterman Street between Main Street and Pennsylvania Avenue. The confectionery store was visited and inspected. In the front of the store on the right-hand side are located the candy cases. To the left is found the soda fountain. The clerks are courteous, the delicacies are tasteful. Clean water is used for cleansing and rinsing the plates and silverware used. The refuse containers are kept apart and covered. The rear part of the store holds twenty-five tables and fifteen side booths. The tables accommodate four people, likewise the side booths. No antiquated Wurlitzer organ is present, a factor important in the increase of the patronage of this store. The floor is kept clean, the air is wholesome and maintained so by fans. The patrons appear satisfied.

In the late of autumn of 1922 Greensburg welcomed the opening of its most modern hotel, the Penn-Albert, managed by W. S. Grenoble, located on Harrison Avenue, adjoining the Pennsylvania Railroad Station. This hostelry is eight stories high and has an entrance on North Pennsylvania Avenue, as well

as on Harrison Avenue. It is an unique venture in the city in that it has, besides the regular room and bath for one or two individuals, apartments of two and three rooms suitable for light housekeeping. The hotel has accomodations for five hundred guests. The office is situated on the first floor and a small but pleasant lobby furnishes a lounging place for the care-free. On the mezzanine one finds a public stenographer. Just off this inter-floor is the ball room, a moderate sized but well appointed hall with sufficient dancing space for a hundred couples.

The restaurant is on the first floor just off the lobby. An inspection of the kitchen reveals an orderly arranged system with pots, pans, dishes, boilers, bakeries, stores, in place. The floor is kept scrupulously polished. The refuse is neatly and efficiently disposed of. This is but a new establishment. One wonders how long the system will function. It is to be hoped that Greensburg may possess for a long time the House as it now is.

Other hotels in the town are the Rappe on West Otterman Street; the Keystone on West Pittsburgh Street; the Zimmerman House on South Main Street, and the Lincoln on Harrison Avenue. Of these hostelries one can state that a general reorganization of the system and a thorough overhauling of the equipment would serve handily to place each one on a competitive basis with the Penn-Albert. The Keystone

Hotel has ceased maintaining a dining room since the Volstead Act was put in operation.

Greensburg has numerous rooming houses, and boarding houses, the relative merits of each of which illustrates every conceivable degree of cleanliness and conduct. The houses conducted by the foreign element of the town, as found on East Otterman Street, South Main Street, and Moone's Row might well be investigated by the health authorities.

Restaurants:

Of these there are a half dozen located in the business section of the town. The Girls' Club of Greensburg maintains a dainty lunch room on North Main Street just off Otterman Street where well prepared food is obtainable. It is but a comparatively new project and one that should be encouraged. Findley's Restaurant at the corner of Pennsylvania Avenue and West Pittsburgh Street is probably the most popular eating house of the town. Waterbugs are not a myth in this establishment and clean coats and aprons are not the rule. The patronage tolerates this. The kitchen is fairly well cared for and an attempt is made to keep it clean. The large stove and the cooking range are polished. The bulk of the perishable foodstuffs is kept in a refrigerator. Two

windows into the kitchen let in light and air, and a fan is installed for use in the summer months.

Barber Shops:

There are fifteen barber shops in Greensburg. Two of these are conducted by negroes, Mr. Hackney and Mr. Nimmy. The foreign element of the town and district patronize shops under the management of Italians and located on Harrison Avenue. The most modern barber shops are the following: - Bruning's on Main Street, with five chairs; Mithcell's with four chairs; Daerr's on Pennsylvania Avenue, with five chairs. These shops were visited and inspected. Each barber has a sterilizer in which are kept the razors, scissors, clippers, combs and hand towels. Each shop possesses an autoclave in which the towels for massaging and washing are prepared. The floors are noticeably clean; the windows and walls are clean likewise. The barbers are courteous, well groomed and accomodating.

Educational Literature:

From time to time different campaigns have been carried on in the town. That against tuberculosis as previously discussed, has been the best organized. Under

CHILD HEALTH ALPHABET



Child Health Alphabet

By
Mrs. Frederick Peterson



Health in Education

Education in Health

1920
Child Health Organization
of America

156 Fifth Avenue

New York

WESTMORELAND PUBLIC HEALTH ASSOCIATION
Y. M. C. A. BUILDING
GREENSBURG, PA.



CHO-CHO

CHO-CHO says! and CHO-CHO knows!

that if you do as these rhymes
say, eat and drink and bathe,
and play and sleep in the good
fresh air, you will surely be
happy and gay.

Copyright, 1918
Child Health Organization
of America

1st Edition	Nov., 1918.	10,000
2d Edition	April, 1919.	1,000,000
3d Edition	May, 1919.	20,000
4th Edition	Oct., 1919.	21,000
5th Edition	Feb., 1920.	30,000
6th Edition	May, 1920.	20,000



A is for *Apples*
and also for *Air*;
Children need both
and we have them to spare.



B is for *Butter* spread
thick on *Brown Bread*,
Also for *Baths*
before *Breakfast* or *Bed*.



C is for *Cereals*
and *Cocoa* too;
Consider the *Calories*
coming to *You*.



D is for *Dates*,
the kind that You eat,
Deliciously sweet
and far cheaper than Meat.



E is the Excellent
Edible *Egg*,
One daily at least,
dear Children, we beg.



F is for *Fruits* whether
fresh, dried or stewed;
Dried, at the Grocer's,
you'll buy them, if shrewd



G is for *Gaining*,
as every Child could;
A half pound a Month
is the least that he should.



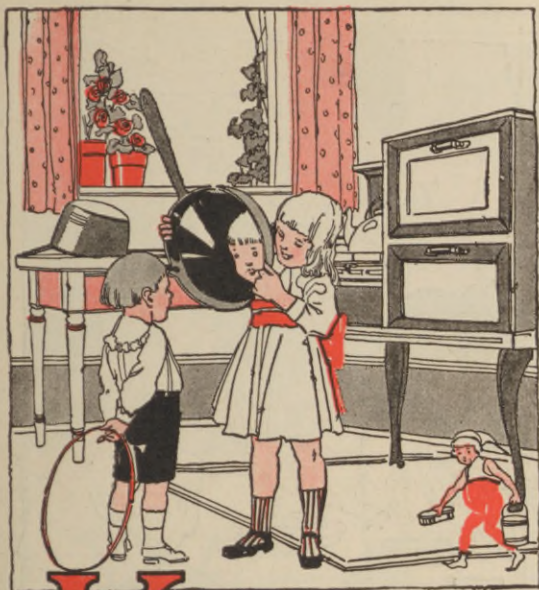
H is for *Height*,
be as tall as you can,
Weight up to *Height*
makes a healthy strong Man



I is for *Iron*
in Spinach and Eggs,
Builds Red Blood and Sinews
for strong Arms and Legs.



J is for *Jam*
and also for *Joy*,
Which spread on his Bread
it brings to a Boy.



K is for *Kitchen*
so spick and so span,
We all like our Food
from a shining clean Pan.



L is for *Luncheon*
served hot in the School;
We wish all the Teachers
could follow this Rule.



M is for *Milk* which
makes *Muscle* and Bone;
One pint a day
would be best till you're
grown.



N

is for *News*
of habits you need,
To grow up so healthy
You're bound to succeed.



O is for *Oatmeal*,
the finest of Food;
With Milk for your Breakfast
there's nothing so good.



P is for *Prunes*,
Potatoes and *Peas*,
And *Patriots* who will
be glad to eat these.



Q is for *Quiet*,
we frequently need;
After Meals don't run
at the top of your speed.



R is for *Rest*
and *Round Rosy Faces*.
Rest is a thing
which nothing replaces.



S is important
and therefore I hope
You'll pardon my specially
mentioning *Soap*.



T is a *Topic*
which *Trouble* begins;
Both *Tea* and *Coffee*
for Children are Sins.



U *Understanding*
the best way to live,
United for Service
our Country to give.



V is for *Vegetables*;
if you're too slim,
These *Victuals* are full
of *Vigor* and *Vim*.



W is for *Water*,
the best thing to drink
Between Meals
as often as ever we think.



X is for *Xtras*
of Soup or of Milk,
For a thin little Girl
till she's finer than Silk.



Y is for *You*,
and I tell you the Truth,
Learn to be Healthy
and Strong in your *Youth*.



Now march for it, Children,
with Drum and with Fife,

Z is the *Zest*
which Health
gives to Life.



CHO-CHO

CHO-CHO wants to know how much you weigh now.

AND

CHO-CHO wants to know how much you gain each month.

LOOK ON THE NEXT PAGE!

HEIGHT and WEIGHT TABLE for GIRLS

Height Inches	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs
39	34	35	36											
40	36	37	38											
41	38	39	40											
42	40	41	42	43										
43	42	42	43	44										
44	44	45	45	46										
45	46	47	47	48	49									
46	48	48	49	50	51									
47	49	50	51	52	53									
48	51	52	53	54	55	56								
49	53	54	55	56	57	58								
50		56	57	58	59	60	61							
51			59	60	61	62	63	64						
52			62	63	64	65	66	67						
53				66	67	68	68	69	70					
54				68	69	70	71	72	73					
55					72	73	74	75	76	77				
56					76	77	78	79	80	81				
57						81	82	83	84	85	86			
58						85	86	87	88	89	90	91		
59						89	90	91	93	94	95	96	98	
60							94	95	97	99	100	102	104	106
61							99	101	102	104	106	108	109	111
62								104	106	107	109	111	113	115
63								109	111	112	113	115	117	119
64									115	117	118	119	120	121
65									117	119	120	122	123	124
66									119	121	122	124	126	127
67										124	126	127	128	129
68										126	128	130	132	133
69										129	131	133	135	136
70											134	136	138	139
71											138	140	142	143
72												145	147	148



Prepared by, Dr. Thomas D. Wood

About What a GIRL Should Gain Each Month

AGE	AGE
5 to 8..... 6 oz.	14 to 16..... 8 oz.
8 to 11..... 8 oz.	16 to 18..... 4 oz.
11 to 14..... 12 oz.	



Do as much better than the average as you can.

HEIGHT and WEIGHT TABLE for BOYS

Height Inches	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs
39	35	36	37											
40	37	38	39											
41	39	40	41											
42	41	42	43	44										
43	43	44	45	46										
44	45	46	46	47										
45	47	47	48	48	49									
46	48	49	50	50	51									
47	51	52	52	53	54									
48	53	54	55	55	56	57								
49	55	56	57	58	58	59								
50		58	59	60	60	61	62							
51		60	61	62	63	64	65	66						
52		62	63	64	65	67	68	69						
53				66	67	68	69	70	71					
54				69	70	71	72	73	74					
55					73	74	75	76	77	78				
56					77	78	79	80	81	82				
57						81	82	83	84	85	86			
58						84	85	86	87	88	90	91		
59						87	88	89	90	92	94	96	97	
60						91	92	93	94	97	99	101	102	
61							95	97	99	102	104	106	108	110
62							100	102	104	106	109	111	113	116
63							105	107	109	111	114	115	117	119
64								113	115	117	118	119	120	122
65									120	122	123	124	125	126
66									125	126	127	128	129	130
67									130	130	132	133	134	135
68									134	135	136	137	138	139
69									138	139	140	141	142	143
70										142	144	145	146	147
71										147	149	150	151	152
72										152	154	155	156	157
73										157	159	160	161	162
74										162	164	165	166	167
75											169	170	171	172
76											174	175	176	177



Prepared by Dr. Thomas D. Wood

About What a BOY Should Gain Each Month

AGE	Weight Gain	AGE	Weight Gain
5 to 8	6 oz.	12 to 16	16 oz.
8 to 12	8 oz.	16 to 18	8 oz.



Weight and measures should be taken without shoes, and in only the usual indoor clothes.



CHILD HEALTH ORGANIZATION OF AMERICA



The CHILD HEALTH ORGANIZATION of America has undertaken a nation-wide campaign to raise the Health Standard of the American School Child.

We shall be glad to know your community problems, make suggestions for local work, furnish a speaker if expenses are paid, and supply literature at cost.

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HALPERT

The Perfect Gentle Knight



Hester D. Jenkins

THE PERFECT GENTLE KNIGHT

By Hester Donaldson Jenkins, Ph.D.

WITH AN INTRODUCTION BY

Charles M. DeForest

Modern Health Crusader Executive



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Sentiment and idealism are impelling forces of tremendous power, and the organizers of the Modern Health Crusade have done a notable service for humanity in harnessing these great forces for the promotion of health. Because those who are engaged in this work have felt that their efforts could be made more effective by a booklet setting forth the connection between the Old Chivalry and the New, *The Perfect Gentle Knight* has been prepared. Its issuance gives to World Book Company genuine pleasure; the more so because it was in the field of health that the Company first wrought out in concrete form its motto, "Books that Apply the World's Knowledge to the World's Needs"

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Introduction

CHIVALRY served the Middle Ages very much as vigilance committees did the days of '49 in California. It kept law and justice alive until orderly government could be set up.

In these modern ages the chivalry of arms has passed, but the spiritual force that Arthur harnessed still serves. Through poets and chroniclers, chivalry calls the children of every generation to noble deeds. The strong are to protect the weak from the enemy within and the invader without.

For many years, chivalry worked invisibly. Most people, like Don Quixote of the windmill, failed to recognize it outside of armor. But now, in the guise of health chivalry, it has become apparent to millions. The spirit of chivalry is leading legions of Modern Health Crusaders in American schools and others in Europe and Asia to train for strength, to protect the weak, and to repel the invader. Disease is an enemy no less formidable than robber baron and pagan horde.

The success of the Modern Health Crusade as a system of instruction is due to the interest it creates in the children. The two factors in education are *knowledge* and *will to apply*. The former has had disproportionate emphasis. In health teaching, the will to do must be aroused and sustained. For this, interest must precede will and must accompany it until good health habits are formed. In the Crusade, chivalry supplies and sustains interest through its titles, badges, and advancements, its

tourneys, and its united movement against the enemy.

The tales of ancient chivalry provide an urge to noble deeds in health chivalry. In writing this book, Dr. Jenkins has done a notable service to teachers and public health workers who are laboring to solve the health problem in the way it must be solved—through the children.

CHARLES M. DEFORREST

*Modern Health Crusader Executive
National Tuberculosis Association*

To James Jenkins, Jr., Executive Secretary of the Hampden County (Massachusetts) Tuberculosis Association, acknowledgment is due for having first suggested to the author the writing of this book.

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*A knight ther was, and that a worthy man,
That fro the tyme that he first bigan
To ryden out, he loved chivalrye,
Troulthe and honour, fredom and curleisye. . . .
He neer yet no vileinye ne sayde
In al his lyf, un-to no maner wight.
He was a verray parfil gentil knight.*



Why There Were Knights

*When every morning brought a noble chance,
And every chance brought out a noble knight.*

THE knights lived hundreds of years ago in Europe. The world then was very different from the world we know. The people did not live much in cities, but gathered commonly around strong castles, where they might seek protection from robbers and bullies. There was very little law, and nobody was hired by the state to protect travelers or lonely women or children. There were no police, but everybody looked to the knights for help.

If a lord seized a beautiful lady and tried to carry her off by force, she would call for a knight and he would fly to her rescue. A knight loved to fight in a good cause and asked nothing better than to lay a bold baron by the heels and then lift the distressed maiden to his saddlebow and gallop with her to safety. In the old story, when lovely Elsa was accused of having murdered her brother, she knelt and prayed for a knight to champion her, and lo! Lohengrin came down the stream to her.

If a rich merchant were captured and put into a dungeon while the robbers took his bags of gold, it was to a knight he looked for rescue. If a monastery were attacked, it was a band of knights that would drive off the assaulting party. If a person were in danger of losing his property, a gallant



A lady, who has been rescued by a knight, resting under a tree. (From a drawing in an old Latin Psalm Book.)

knight would fight and down the unjust claimant.

Then, too, the kings had no regular armies, but were dependent on bands of knights and squires to drive out invaders and keep order in the land.

To do all these things, the knights had to be very brave, skillful, and strong; and they were expected also to be loyal, gentle, and true.

One of the most famous of the early knights was Sir Lancelot. If we listen to what was said of him by an early writer, we shall get some idea of how

many virtues a knight should have. This was the noble eulogy of Sir Lancelot:

“Ah, Sir Lancelot, thou wert head of all Christian knights; and now, I dare say, Sir Lancelot, there thou liest; thou wert never matched of none earthly knight’s hands; and thou wert the courtliest knight that ever bare shield; and thou wert the kindest man that ever struck a sword; and thou wert the goodliest person that ever came among press of knights; and thou wert the meekest man and the gentlest that ever ate in hall among ladies; and thou wert the sternest knight to thy mortal foe that ever put spear in rest.”

All knights were men who had proved their courage by their deeds; even kings were proud to be ranked as knights. One of the first kings who was also a knight was King Arthur of Britain.

There really was a British King Arthur who ruled over a little kingdom in England about 500 A.D. He had to fight very hard to keep his kingdom from the Saxons, but he finally ruled in peace for some twenty years.

About this far-off king there gathered a number of romantic legends that show the way the people of that long-ago time thought and lived. The story of Arthur is told in the next chapter.



Arthur, the King-knight

*First of all the kings who drew
The knighthood-errant of the realm and all
The realms together under him, their Head,
In that fair Order of the Table Round.*

UTHER, king of Britain, lay dying. All the nobles were wondering who would be the next king, and many were ready to seize the kingdom for themselves. None of them knew that Uther had a young son, Arthur, whom he had given to the magician, Merlin, in babyhood. With his last words Uther left the kingdom to his son, then died.

The greedy nobles all wished the kingdom, but Merlin said to them:

“Let all the lords of the realm meet me at Christmastide in Saint Paul’s Church in London, and I will show them who has the kingdom by right.”

So at Christmastide they all met in the church, and after they had prayed they went into the churchyard. There they saw a strange sight. A great square stone had on it an anvil of steel, and deep in the anvil was a naked sword whereon was written in letters of gold:

"Whoso shall pull this sword out of the anvil, he is King of England by right."

Then many lords that hoped in their hearts to become king went to the sword and pulled with all their strength, but it stuck fast in the anvil. So they went away in disappointment, and ten men were set to watch the stone.

On New Year's Day there was a great tournament, to which came all knights from far and near. Now the boy Arthur was living with his foster father, Sir Ector, whom he thought to be his real father. Early in the morning of this day Arthur started for the tournament, with Sir Ector and his son Sir Kaye. They had not gone far when Sir Kaye found that he had left his sword. He asked Arthur to run back and get it.

But every one had gone to the tournament, and Arthur could not find the sword when he returned. Then he remembered the sword he had seen in the churchyard, and said to himself:

"I will take this sword, for my brother must not lack a weapon."

He went into the churchyard unchallenged, for the guards, like the rest of the world, had gone to the tournament. Grasping the handle of the sword, he pulled the weapon easily from the anvil and carried it to Sir Kaye.

When Sir Kaye saw the weapon, he was much excited, for he recognized it, and he said to himself:

"Now I have the magic sword and I shall be king of England."

But when Sir Ector saw the sword and learned that it was not Sir Kaye, but Arthur, who had

pulled it from the anvil, he cried to the amazed boy:

"It is you who must be king in this land."

"For what cause?" asked Arthur, much puzzled.

"Because God will have it so. But first put the sword back in the anvil."

"That needs no pains," said Arthur, and, going to the churchyard again, he put it back in its place.

Then Sir Ector and Sir Kaye tugged and tugged at the sword but could not stir it from the anvil. Yet when Arthur grasped the handle, the sword followed his hand lightly, as if it knew its master. Sir Ector and Sir Kaye thereupon knelt and saluted Arthur as king.

In time all the other nobles recognized him, for one had only to look at him to see that he was a true king, so splendid was his presence and so noble his expression. In a few months Arthur was crowned, and he swore to his lords and commons that he would be a true king and would govern them with true justice from thenceforth all the rest of his life.

In those days every knight had his sword that he loved and trusted, for on its keenness and strength often depended his life or the lives of those whom he was serving or rescuing. The sword that Arthur took from the anvil served the king faithfully until he used it in an unfair fight, when it broke in his hand. As, wounded, he rode away from the fray with Merlin, he looked at his empty hands and said:

"I have no sword."

Then Merlin promised him that he should right soon have a noble sword that would never fail him.

So they rode on until they came to a fair lake. When Arthur looked on the face of the lake, he saw an arm thrust forth from the midst of the water, clothed in shining white, and holding upright a brave sword.

"Look you," said Merlin. "That is the sword that you shall have."

As they looked they saw a maiden coming toward them on the face of the lake. When Arthur had greeted this maiden, who was the Lady of the Lake, she advised him thus:

"Step into yonder boat and row to the place where you see the arm, and take the sword."

The king did this, and then the arm sank beneath the water and was seen no more. But there remained in his hands a glorious sword of shining steel, its handle set with gleaming jewels.

While the king was admiring this wondrous gift, Merlin asked him whether he most admired the sword or the scabbard. Like a true knight Arthur replied, "The sword." But Merlin told him that the scabbard was ten times as valuable as the sword, for with that on his person Arthur could never lose any blood, were he ever so sorely wounded.

Now Arthur was wiser than the magician, for he knew that service and honor are far more valuable than life blood. With splendid disregard he gave the scabbard into the keeping of his sister, and so it happened that it was not with him to save him in his last fight.

But the sword he loved and kept ever at his side. As was the custom in those days, he gave it a name. He called it *Excalibur*, which means "cut steel."



The Round Table

*The goodliest fellowship of famous knights
Of which the world holds record.*

WHENEVER Arthur wanted anything especially difficult done, outside of fighting, it was to Merlin he turned—Merlin, the magician, of vast wit and a hundred winters. So it was Merlin who contrived the Round Table.

But first Arthur ordered built in Camelot a magnificent castle, in whose spacious halls the table was to stand. In twelve niches around the wall stood statues of twelve kings whom Arthur had vanquished, each one holding a blazing torch.

In the midst of the hall stood the great table of polished wood, literally a round table. The king made the table round so there would be no head to it and no higher positions. All were to meet as equals, with no feeling of pride or superiority on the part of any one. In the words of the "Romance of Arthur,"

*That no man schulde syllt above another,
Nor have indignacioun of hys brother;*

*And alle hadde one serryse . . .
Thus he kept ye table Rounde.
Whyle he leved on ye grounde.*

Some say that the table seated one hundred and fifty knights, the flower of King Arthur's fighters. The more popular story is that it had seats for only a few, but that it had the magic power of extension to make room for any knight who should prove himself worthy of the honor.

When all was finished, King Arthur viewed his work with pride and joy, saying to his magician:

"Behold! the hall is erected; the table is here; the seats are ready. Name me now the knights worthy to sit here."

To the knights whom Merlin chose, Arthur gave a great banquet; and all their hearts were lifted in exaltation, for had they not been chosen by their king? And from this time on each man's heart was fixed on the doing of pure and noble deeds.

At the Round Table there was one seat that had no guest. This was known as the *Siege Perilous*, or the "dangerous seat." That it *was* dangerous was well proved when once a haughty lord, coming uninvited, seated himself in the *Siege Perilous* and the earth immediately opened and swallowed him.

Merlin knew, however, that a pure and stainless knight could sit there with safety; and this was soon found to be so.

One day Lancelot of the Lake was appealed to by a distressed damsel. She begged him to follow her and bestow knighthood on a noble youth who had rescued her from danger. Lancelot went with her and knighted the squire, who, raising his visor,

showed himself to be Galahad. Between that knight and Sir Lancelot a noble friendship was formed.

The two went together to the great hall, where Sir Galahad, fearless in his innocence, sat down in the Siege Perilous. Before the knights could recover from their terror at his daring, his name sprang out above his head in letters of gold, and they knew that he had been chosen to be their comrade of the Round Table.

A magic power had written the name of each knight over his own seat, and no one else dared sit there. When a seat was made vacant by death or dishonor, no one could succeed to it without proving himself greater in deeds than his predecessor. If one tried to take a seat for which his exploits had not fitted him, a sudden unseen force would expel him from the seat.

Once one of the knights, Sir Marhaus, engaged in battle with Sir Tristram and was slain by him. For ten years no one was able to show that he was mightier than the slain knight and so take his place at the table. But finally Sir Tristram himself—he who had shown himself a better swordsman than Sir Marhaus—came to King Arthur's court.

Arthur led him by the hand to the Round Table. As he approached, soft, melodious music was heard and Marhaus' name faded out while that of Sir Tristram blazed forth in light. But before Sir Tristram could be admitted to the Round Table, he had to do something that was hard for a modest knight to do: that was to relate his own brave deeds, while the clerks recorded them in a great book.

Of all the knights of the Round Table perhaps the greatest was Sir Lancelot—he who had been reared by the Lady of the Lake, and who was the mirror of knightly honor, courtesy, and valor, he before whose sword and spear all adversaries fell.

Each of the knights of the Round Table was a star, and King Arthur was their sun. Arthur bound these companions of the Round Table by oath to assist one another at the risk of their own lives, to attempt singly the most perilous adventures in aid of those who were distressed, or to lead, when necessary, a life of monastic self-denial. He also swore them to fly to arms for their country at the first summons and never to retire from battle until the foe was defeated or night had come to end the combat.

*And Arthur and his knighthood for a space
Were all one will, and through that strength the king
Drew in the petty pryncedoms under him,
Fought, and in twelve great battles overcame
The heathen hordes, and made a realm, and reigned.*

Peace followed these “great battles” for twenty years, and in that time many of the knights became “knights-errant.” This means that they wandered forth in search of adventure, being spurred on sometimes by love and sometimes by religion.

There was one adventure that only the purest and bravest knights undertook. It was called the *Quest* (or *search*) for the *Holy Grail*.

There was a legend that the cup from which the Saviour drank at the Last Supper had been preserved and brought to England by Joseph of Arimathea. It rested, so the legend said, in an

abbey, and thither came all who had pain or sorrow, and by touching the cup, or Grail, were healed. But in the course of time faith became so weak that the Holy Grail was caught up to heaven and disappeared.

In Arthur's time it reappeared occasionally—a cup glowing with the blood of the Saviour. It was seen only by the purest persons, those who had sought first the Kingdom of God.

The first person to whom it appeared was the sister of Sir Percivale, a "holy maid" whose sorrows had turned her to prayer and fasting.

Waked at dead of night by heavenly music, she saw her cell illumined by the rosy glow from the Holy Grail, which moved silently down a long ray of silver light into her room.

Arthur had hoped so to purify his knights that the Grail might appear to those at the Round Table. But, alas! sin had touched all the knights except the white-armored Sir Galahad. For this stainless knight, the holy maid plaited a strong sword belt of her long, silken hair, entwined with silver thread. Binding it on him, she bade him be her saintly knight and go forth to see the vision she had seen of the Holy Grail.

As Sir Galahad, so consecrated, seated himself at the Round Table, a roll of thunder was heard and a beam of light shot across the hall, and down it slid the Holy Grail. But alas for the knights, the cup was covered by a luminous hand, so that none could look on the rosy splendor of the Grail itself; that is, none but Sir Galahad, to whom it was clearly revealed.

Deeply moved, the companions arose, and in that exalted moment each vowed to forsake all else and seek for a year and a day the blessed vision.

The adventures of the knights-errant in this Quest were many and strange. They encountered wild beasts and dragons; they fought for fair ladies; and they besieged frowning castles and fought giants. Some of them forgot their vows, and others were overcome by temptation. In the end, only three of the knights—Sir Percivale, Sir Bors, and Sir Galahad—obtained a vision of the Grail; but to them life was forever a more sacred thing.

King Arthur praised these three knights who had seen the Grail, but he had only hard words for those who had left the service that they owed him to make vows that they were not constant enough to fulfill.

At length Arthur's course was run. In a hard-fought combat he was fatally wounded. His sword, Excalibur, was with him; but, alas! the magic scabbard was far away. Knowing himself to be dying, he gave the sword to his only remaining companion, Sir Bedivere, and asked him to take it to the lake and throw it in.

Bedivere took the sword, but he was caught by its beauty and value, and instead of throwing it into the lake, he hid it in the marsh and returned to the king.

"What did you see?" asked Arthur.

"Only the waves on the beach," replied the false knight.

Then Arthur knew that he had not thrown

Excalibur into the lake, and he sent him a second time, and again a third. The third time, Sir Bedivere repented of his greed and hurled the sword far into the lake.

When the dying king asked him this time what he had seen, Sir Bedivere replied:

“A white arm rose out of the lake, and taking the sword, brandished it and drew it into the water.”

And then the king was satisfied.

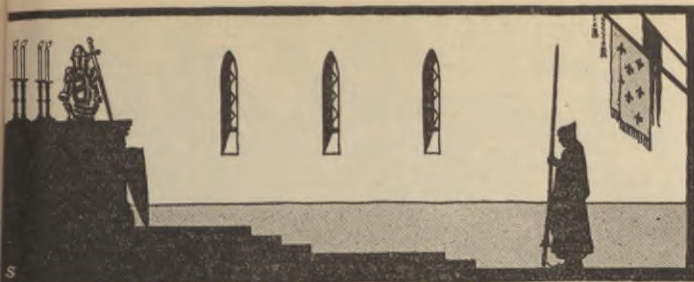
Some say that King Arthur died on that shore, and that three queens came and took his body to a little hermitage for burial. Others say that he never died at all, but still dwells in a beautiful valley of rest in his own Cornwall, and that some day he will come again and rule his beloved people.

In an old, old churchyard there lies an old, old stone that reads:

“Here lies King Arthur, King that was and King that shall be.”

And a poet in a succeeding age wrote,

*Still look the Britons for the day
Of Arthur's coming o'er the sea.*



The Making of a Knight

*Thy sword is to keep thine honor white,
And thine honor must keep thy good sword bright,
And both must be free of slain.*

IT was during the thousand years that followed King Arthur's reign—in that long period known as the "Middle Ages"—that "knighthood was in flower." And its beautiful blossom changed very little from the days when Sir Galahad set out on the Quest for the Holy Grail to the day when Saint Louis of France, eight centuries later, went on a crusade to the Sepulcher of the Lord.

What a gay picture the word "knighthood" brings to the mind! If we have read "Ivanhoe," "The Prince and the Pauper," "The Prince and the Page," "The Talisman," or some other of those fascinating romances of the Middle Ages, we can call to mind a succession of vivid pictures of goodly knights. We can see their shining armor and prancing steeds. We can see floating from their lances the bright colors of their ladies fair.

And we can see the ladies themselves, in quaint,



Knights exercising with the lance. To make the practice interesting, the manikin was so arranged that if the shield was hit on the left the figure revolved on its pivot and struck the horse or rider with the club in its hand.

rich costumes, with nets of gold and pearls binding their sunny hair, bending from their casements to wave at the knights below. And we can hear the sounding of horns and the clash of steel on steel and the shouts of victors. Frowning castles, stone-paved courtyards, splendid pavilions, and brilliant costumes mingle to form a kaleidoscope of chivalry.

But knights were not always in the spotlight. Indeed, they had to work many years before they could become knights at all. A boy had to undergo a long course of training to fit him to be a knight. He had practically to go to school to learn knighthood.

When the boy reached seven years of age, he began his training. His knightly father generally thought the boy's mother too tender an influence for a budding warrior, and his home too soft a place. So he would look about for the bravest knight in the neighborhood and the castle that offered the best military training, and there he would ask for a place for his son. And I think that the mother, for her part, would try to see that it was a comfortable home for her boy.

In this castle, where many men and boys were riding to and fro and there was incessant bustle and activity, the boy of seven, perhaps a little homesick, was placed as a page.

He began his studies at once. They were not much like our school courses, for there were no books. Reading and writing were considered unworthy of a fighter, and suitable only for monks and clerks. But, as in our schools, the boys had physical and moral training and also lessons in manners.

On the moral side, the boy was taught the beginnings of religion and respect for his lord and other superiors, and was trained to be modest, humble, and temperate.

The care of the body was considered very important; for a youth who lacked health and strength could not be a useful squire or a successful knight. So we may be sure that the young page was carefully taught how important are plenty of sleep, good nourishing food, and outdoor exercise in building up a strong body. Doubtless he saw the heroes of the tournaments prepare themselves for their

tests of strength and skill, as our modern athletes do, and was advised by them about the habits of his daily life. Of physical exercise, we know he had plenty; for a part of his training was to learn riding, hunting, fishing, wrestling, tilting with the spear, and falconry. He was also given lessons in the accomplishments of dancing and of playing the lute, the harp, and the guitar.

If this sounds like play, remember that he had besides to do all sorts of service, such as carving the great roasts at table, and he also served the ladies of the castle in a hundred different ways. During these years that he was called a page, he was especially attached to the service of some knight, whom he took for his model.

After seven years, or when he was fourteen years old, the page was promoted to be a squire.

His exercises now became more severe. He practiced running, scaling walls, springing over ditches, and wrestling. He was also required to do such hard things as to swing a heavy battle-ax a stated number of times without stopping, and while clad in heavy armor to vault upon a horse.

The squire's regular duties were also harder than those of a page. He helped his master to get into his heavy armor, lacing the helmet and buckling the cuirass. Then when his master rode forth on an "easy" horse, the squire, carrying the shield and helmet, led the splendid armed charger, that had to be large and strong enough to carry the lord and his armor in combat. In battle the squire kept close by his lord, brought him a new mount if his horse gave out, or, in case he was beset by too large a number



Lady receiving the homage of a knight. (A twelfth-century seal)

at once, went into the fray and relieved him. Many a faithful squire saved his master's life. The squire also helped to guard and defend the castle, which was really a fortress.

Both page and squire were trained in the manners proper to a court, and often learned to be gallant courtiers who could compose a verse to a fair lady, sing it to the accompaniment of a guitar, and in general make themselves very charming.

Just as we become of age at twenty-one, so squires at the same age attained their majority and were knighted. Usually they were knighted at some special time,—the eve of battle or some season of solemn warning or grand festival. An impressive ceremony was made of such an occasion.

For the ceremony of knighthood the youth made a careful preparation. He had to fast and possibly take a bath of purification. Next he must make confession, and finally, clad in snow-white garments, he must hold vigil, or watch, all night in the lonely castle chapel.

As he lay in prayer on the hard stone of the church, or paced the floor in meditation, the shadows of the place made only deeper by the faint lights on the altar, he had ample opportunity to think over the vows of knighthood and its ideals.

He knew that a true knight must be generous, giving freely to the poor and needy. He must be brave and daring, always ready to face danger and endure hardship, and no foe must ever see his back. He must keep his body clean and strong, else he could not do good service. Pride, boasting, and vainglory were forbidden him, and he must speak the truth under all temptation.

When morning came, the candidate received the sacrament and the blessing of the Church. Clad in pure white, he went to the hall, with the sword suspended from his neck. There the priest blessed the sword and returned it to him. Then the youth knelt with folded arms before his lord, who, after asking him what his motives were in seeking knighthood, granted that which he so earnestly desired.

Then lovely ladies and gallant knights advanced and began to dress him in his first armor. How proud he must have felt! They fastened spurs to his heels, for every knight was a horseman; they clad him in a coat of mail, and put on hauberk,



Arming a knight after he has received the accolade. (From a thirteenth-century manuscript.)

armlet, and gauntlet; and lastly they girded on the sword.

The candidate then knelt before the lord, who, rising from his seat, bestowed the *accolade*. This was done by giving three light strokes with the flat of the sword on the shoulder or neck, with the words:

“In the name of God, Saint Michael, and Saint George, I make thee knight. Be valiant, courteous, and loyal.”

The newly-made knight received his spear, helmet, and shield, and went forth.

Sometimes when a youth had done some deed of especial daring on the battlefield, the king or leader would “dub” him knight on the spot; that is, he would give him the *accolade*, saying, “Rise, Sir Tristram” (or whatever his name might be).

Certain knights were promoted to *knights-*

banneret. A knight was something like a captain, but a knight-banneret was more like a colonel. When a knight-banneret fought for the king, he always brought a company of his own men to fight with him.

The knight carried on the point of his spear a pennant with either one or two tails. When he was raised to the rank of knight-banneret, heralds cut off the tail or tails of his pennant and it became a square banner. As there were no national flags in those days and no uniforms, no two knights looked just alike or wore the same colors.



Knighting a squire for bravery on the field of battle. (From a thirteenth-century manuscript.)

Of course, not all the knights lived up to their vows. There were even robber knights, and some orders of knights came to have unsavory reputations. But a true knight was a noble gentleman.

Four of the most famous orders of knighthood were the Knights Hospitallers, the Knights Templars, the Knights of the Golden Fleece, the Knights of Saint Michael and Saint George. The Order of Saint George was based on a very interesting story.

It is related that several centuries before King Arthur there lived a knight of remarkable courage and prowess, called George. Although he was English, George wandered all over the world, for he was the first knight-errant who left his island to seek worthy adventures.

After months of journeying he reached Egypt. There he was greeted with tales of a fearful dragon whose breath was so poisonous that every day it slew many people. The only way to placate the dragon so that he would not poison all near him was to offer him an innocent maiden to swallow alive. This had continued for twenty-four years, and no man had been found strong and fearless enough to destroy the horrible creature.

When George reached Egypt, the people were nearly frantic with fear, for the last maiden had been sacrificed to the dragon, except the daughter of the king, and on the morrow her time would come; then, after that, all Egypt would be devastated by the monster. George was told that the king in his desperate need had offered his daughter in marriage, with the crown of Egypt after his own death, to the knight who would slay the dragon.

To any champion seeking dangerous deeds, this was a great opportunity to win lasting renown, and George took it. He vowed that he would either save the king's daughter or perish in the attempt.

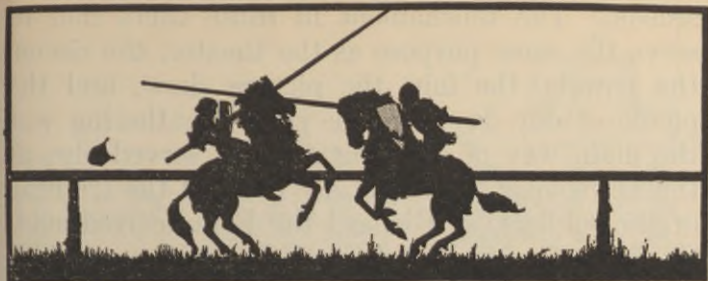
The next day he went to the dread valley where the poor princess was awaiting her fate. As he entered the valley, the dragon sprang out at him, breathing fire and roaring like the sound of thunder. It was a vast monster with scales of brass—a horror to behold.

Immediately it lashed its terrible tail, and hitting the horse, swept him over. George fell to the ground with two broken ribs, and with his spear shattered. But he was up and at it again, fighting the most terrible fight of his life. Remounting, he smote again and again with his sword, but could make no impression on the brassy scales. At last he got in a blow in an unprotected place under the right wing, and drove in his weapon to its full length. The monster rolled over and was dead.

Then the brave knight lifted the princess tenderly, and placing her on his horse, carried her back to the court. When the people saw him with the dragon's horrid head upon his spear and the maiden on his horse, they went wild with joy and proclaimed him the greatest champion of the world.

His reputation as the bravest of knights never faded, and for hundreds of years every Englishman in a fight called on the name of George. He was made a saint, and on him the warriors called as they rushed into battle, crying:

*Saint George of merry England,
The sign of victory!*



The Tournament

*A steed! a steed of matchless speed!
A sword of metal keen!
All else to noble hearts is dross,
All else on earth is mean.
The neighing of the war horse proud,
The rolling of the drum,
The clangor of the trumpet loud,
Be sounds from heaven that come.*

IN the Middle Ages people had very little with which to amuse themselves. In the castles there was generally a jester to poke fun at some one, and there was often a minstrel who sang songs of the heroes or told long-winded tales. Sometimes the knights themselves played the harp or the lute and in friendly rivalry composed songs to their ladies.

Occasionally great feasts were held; but the food would seem to us very heavy and without variety, for there were almost no fruits or vegetables and none of the foods that we get from the Orient or the tropics; in fact, there was very little besides great platters of meat washed down with a sort of heavy ale.

So the tournaments were the great events of the

season. The tournament in those times had to serve the same purpose as the theater, the circus, the parade, the fair, the picture show, and the picnic of our day; and as such a gathering was the main way of carrying news, it served also as the newspaper. Incidentally it aided the training of the soldiers, as Richard the Lion-hearted said, "in feats of arms, that they might grow more skillful and perfect in the same when they should come to the trial of their forces." The game of the tournament was to unhorse the opponent.

Tournaments started in France and soon became popular all over Europe. They were trials of skill and strength between single knights or groups of knights, armed usually with lance or spear, and mounted. Sometimes they were held in castle yards and sometimes in fields just out of the town. As years went on, they became less rude and dangerous and more contests of skill, but they differed greatly in different countries.

In England the knight was weighed down under his heavy armor, and his massive spear and battle-ax did fearful damage to his victims. In France the weapons and armor were lighter.

It was common to celebrate a royal wedding or other great event by a splendid tournament, to which all the world was invited and from which no one, lord or burgher, lady or peasant, king or monk, would stay away. The heralds were sent over the countryside crying the news of the tournament, and every one told his neighbor and made his plans to spend a long, exciting day—or, it might be, week—at the tournament.



Tournament in honor of the entry of Queen Isabel into Paris. (From a fifteenth-century manuscript.)

Originally the "lists"—the name given to the place where the combats were held—were round like our circus rings, but later they were laid out in squares or oblongs. The gallery, or wall, was gilded and gayly colored, and painted with the coats-of-arms of the knights. Over this low wall hung splendid tapestries, and here the knights who wished to take part in the "passage of arms" hung their banners or shields. That was their way of entering their names for the contest. Before the tournament the lords and ladies strolled along and inspected the

shields, and if any lady had a grievance against one of the knights, she touched his shield with her hand; then, if the judges saw fit, they shut that knight out from the combat.

Often the lists were covered, for neither lords nor ladies relished having their rich velvets and satins spoiled by the rain. Sometimes the gallery was shaped like a series of towers and magnificently decorated. When it was filled with a crowd of nobles and their ladies all dressed in the hues of the rainbow, it was a gorgeous sight.

The first on the lists were the sergeants to keep order, and the heralds who would later carry off the wounded and would act as recorders, noting every brave and daring action. Bands of musicians played gallantly on instruments more noisy than melodious.

The ladies, we may be sure, arrived in plenty of time, full of curiosity as to the knights and each tenderly interested in the one who wore her favor. They eagerly watched the wooden gates, which opened to admit the knights entering on horseback two by two, each followed by his squire, while the trumpet blew a fanfare.

Banks of plain benches accommodated a crowd of workers and serfs, and those who could not get in climbed trees or posts to get a view, just as boys do at a baseball game today.

Unless there was a royal box at a tournament, the box that drew the most attention was the pavilion of the "Queen of Love and Beauty." It was decorated with pennons and banners bearing interlaced hearts, bleeding hearts, and all the figures of a valentine.

In Sir Walter Scott's novel, "Ivanhoe," there is an excellent description of a tournament, and a good idea of the several days' events is given by the laws of the tournament as the heralds in this tournament proclaimed them:

First, five challengers were to undertake all comers; that is, they would attempt to unhorse any who wished to encounter them.

Secondly, any knight proposing to combat might, if he pleased, select a special antagonist from among the challengers by touching his shield. If he did so with the blunt end of the lance, the trial of skill was made with what were called the arms of courtesy; that is, with lances tipped with a piece of round, flat board so that no danger was run. But if the shield were touched with the sharp end of the lance, the combat was understood to be as in battle; that is, the knights were to fight with sharp weapons.

Thirdly, when the knights present had accomplished their vows by each of them breaking five lances, the Prince was to declare the victor in the first day's tourney. The victor was to receive as a prize a war horse of exquisite beauty and matchless strength; and, moreover, he would have the peculiar honor of naming the Queen of Love and Beauty by whom the prize would be given on the following day.

Fourthly, it was announced that, on the second day, there would be a general tournament, in which all the knights present might take part, and being divided into two bands of equal numbers, would fight it out manfully until the signal was

given by the Prince to cease fighting. The elected Queen of Love and Beauty was then to crown the knight who the Prince should decide had fought best this day, with a coronet of thin gold plate cut in the shape of a laurel crown.

On the third day, feats of archery, bull-baiting, and other popular sports followed.

Before the fighting began the knights distributed "largesse" (coins) among the crowd. After it was over, the victorious knight was led in triumph to the feast, and here he might kiss the fairest lady present.

In the tournaments the knights had a chance to display their military training, their personal bravery and skill at arms, their courtliness toward the ladies, and sometimes their endurance and self-control. How they bore the tests of defeat and victory before so many curious eyes showed, as we would say today, whether they were "good sports" or not. When they fought on sides, they showed whether they could do team work. And the crowd "went wild," in quite a modern fashion, over its favorite heroes.

So, although costumes and customs have changed, the spirit of our athletic contests is after all very much like that of the medieval tournament.



The Knights of Charlemagne

*Our business is like men to fight,
And hero-like to die!*

IN the year 800 the mightiest ruler in Christendom was the Emperor known as Charlemagne, which means Charles the Great.

At first Charlemagne had only a small kingdom, but it grew rapidly larger as he fought and conquered all the neighboring tribes. Finally, his empire came to include most of central Europe. The peoples against whom he fought were mostly heathen, but as he conquered them he converted them to Christianity or baptized them against their will in the nearest stream. Late in his reign he fought also the Mohammedans in Spain; so he came to be known as the great champion of the Church.

Concerning the reign of Charlemagne there has come down to us a great number of legends and poems, such as the wandering minstrels sang to amuse the lords and ladies. Many of these legends are about Charlemagne's knights, especially Ogier the Dane, Oliver, and Roland.

The stories about Roland begin with his birth. Charlemagne's sister, Bertha, wished to marry a knight who was poor and little known. The Emperor was so angry that she fled with this knight to Italy and was soon forgotten at Charlemagne's court. Her husband was killed in battle, leaving her with a little son, Roland. Bertha was so poor that she and the child lived in a cave and had scarcely enough to eat.

But Roland grew to be a fine, handsome boy, with flaxen hair, an erect figure, and a bold manner. He was so strong that he became the champion of the village boys. Once in a local quarrel he wrestled with the governor's son, Oliver, and threw him, whereat Oliver was so admiring that he begged for Roland's friendship.

The annals of knighthood are full of beautiful friendships, but none of them is more beautiful than the friendship of Roland and Oliver. In the little Italian village where Roland lived, Oliver was the governor's son and Roland but a poor boy living in a cave. But their spirits, as well as their vigorous young bodies, were well matched.

One Christmas season the Emperor Charlemagne, with a throng of brilliant followers, passed through the town where the two boys lived. Roland and Oliver, with all the rest of the villagers, watched them go through the streets.

Roland saw the Emperor's servitors carrying their lord's dinner in great silver dishes. Now Roland was very hungry, for he and his mother had lived on goat's milk and crusts of bread for some days. The boy's heart burned within him

as he thought of his starving mother, and snatching a huge platter of meat from an astonished servant, he ran with it to his cave. Then, emboldened by his success, he came back and seized a goblet of Charlemagne's own red wine.

When the Emperor heard of the theft, he was greatly troubled, for he had had a dream telling him that a hungry boy would snatch food from his table and that he must follow him. So he ordered men-at-arms to follow the boy.

They found him at the mouth of the cave. He boldly ordered the soldiers away, saying that his mother was a great lady whom no one might molest, and that he was her page and would protect her. When the men saw Bertha, they recognized her as the Emperor's sister. Charlemagne was grieved and ashamed to find her in such a plight, and he took her and her daring little champion with him and cared for them well thereafter.

Roland was made a page, and later a squire. He was at one time a companion to Ogier the Dane, and as Ogier traveled even as far as the Orient, Roland saw a great deal of the world. Both he and Ogier obtained their knighthood on the field of battle, in the following way:

When Ogier and Roland were both squires, the Emperor was once abandoned in battle by his standard bearer. Ogier struck down the recreant knight, stripped him of his armor, and together with Roland, who had also obtained some armor, rushed into the battle and saved the Emperor. After the battle the youths removed their borrowed helmets and were at once recognized by Charle-



A combat between champions to decide a question that has been submitted to the judgment of arms. (From a fifteenth-century manuscript.)

magne, who was so delighted and so touched by their exploit that he dubbed them knights on the spot. The youths knelt before him, and the Emperor gave them the accolade, saying, "Rise, Sir Ogier; rise, Sir Roland; henceforth my loyal knights."

Then he did them the great honor to gird on their swords with his own hands.

After that, Ogier, Oliver, and Roland took part in all the Emperor's expeditions. Charlemagne was very proud of his brave nephew, and also of the inseparable friend, Oliver. The Emperor often used to say laughingly, "A Roland for your Oliver;" and this phrase is used even today when we mean that two persons or things are well matched.

Charlemagne was a wise ruler, but he shared in the medieval idea that might makes right and that all quarrels and disagreements should be settled by combat. This idea was so general that women, churches, and convents had special champions who would engage in single combat the champion of the man or group oppressing them. This served instead of the legal trial of today.

Each champion before the fight had to swear on the cross and the gospels that the side he was fighting for was right and that his rival was false and disloyal. He also had to swear that he wore no magic charms to save his life (such as the scabbard of Excalibur). Then a herald blew his horn to the four corners of the lists and proclaimed that no one, on pain of death, was allowed to encourage the combatants by cry or gesture. But the fights were exciting enough, for they often were fatal to one of the champions.

After the ground had been measured and the wind and sun noted, the marshal cried three times, "Let them go!"

The combat began at noon and might last until the stars came out in the sky, but generally long before that one of the champions would be laid low. If he still lived, his arms were taken from him and he was disgraced. Once Roland and Oliver engaged in such a duel, but it was more romantic and less tragic than such combats usually were.

Charlemagne quarreled with the Duke of Genoa, and proposed that the matter should be settled by a single combat between two champions. Charlemagne chose Roland as his champion, and the Duke chose Oliver, but no one else knew who they were. The combat took place on an island in the Rhone River, before the two courts drawn up in brilliant array.

The two knights, unknown to each other, advanced in full armor, visors down. They spurred their horses forward, clashing together with such force that both their spears were shattered. So they dismounted and fought with swords. Long they fought, with neither gaining the advantage. At last, at the same moment, Roland's sword broke on Oliver's helmet and Oliver's broke on Roland's armor. Throwing their swords aside, the knights fell to wrestling. Neither could throw the other, but in the struggle they seized each other's helmets and pulled them off. As each recognized his opponent, he fell into the other's arms, Roland crying, "I surrender," and Oliver saying, "I am yours."

When Charlemagne took his army to Spain to fight the Saracens, of course Roland and Oliver

were with him. Both were killed in the tragic battle known as the battle of Roncesvalles.

Roncesvalles is a pass in the Pyrenees. It was held by Roland and his little company, but they were betrayed by a treacherous soldier. Roland had been given a horn which he was to blow whenever he was in dire straits. Trapped in the pass, he fought as long as he could, and only turned to his horn when all hope was gone. Charlemagne heard the horn, but the traitor at his elbow told him that Roland was only chasing a stag; so he did not go to his rescue.

Thus it was that with all of his knights slain, including the faithful Oliver, Roland, desperately wounded, faced his death in the strange valley.

According to the "Song of Roland," he bade farewell to his two stanch friends—his horse, Veillantif, and his sword, Durindana. To his horse he said:

*Ah, never more and never more shall we to battle ride,
Ah, never more and never more shall we sweet comrades be.
Had, Veillantif, had I the heart to die forgetting thee?
To leave thy mighty heart to break in slavery to the foe?
I had not rested in the grave if it had ended so.*

And he slew the charger with his sword. Then to the sword he said:

*I must die, but ere I end,
Let me be sure that thou art ended too, my friend.
For should a heathen hand grasp thee when I am clay,
My ghost would grieve full sore until the judgment day.*

He broke his sword in pieces, then blew a final blast on his horn, and died.



The Crusades and the Cross

*From Palestine the champion came;
The cross upon his shoulders borne,
Battle and blast had dimmed and torn.
Each dint upon his battered shield
Was token of a foughten field.*

KING ARTHUR'S knights fought to free their land from enemies, and, as the stories go, from giants and dragons as well. Charlemagne's knights fought partly to conquer foreign lands for their Emperor, and partly to win over Moslem and heathen people and bring them into the Christian faith.

Later there came a thrilling summons to fight for the "Holy Places," as they were called, and all the knights of Christendom responded.

These Holy Places were the towns of Palestine, especially Jerusalem and Bethlehem, which were held sacred by all Christians because they were the scene of the life and death of their Master, Jesus Christ.

At that time there was a pious custom among men who wished pardon for their sins, or were

attracted to the home of the Lord. These men took staffs in their hands, and with some help from friendly captains of ships, made their way to the Holy Land, begging as they went. They were called pilgrims, and were regarded as very saintly folk. Incidentally, they saw a great deal of the world. In the Holy Land they visited places where their Master had walked and talked and healed, and there they felt that they were forgiven for their sins, and often healed of their sicknesses and sorrows.

Now, after the Mohammedan conquest, Palestine fell into the hands of the Saracens, who, not being Christians, felt little respect for the Holy Places; and as they probably found the begging pilgrims a nuisance anyway, they began to treat them badly. The hearts of the knights burned at the tales that the returning pilgrims told, and they longed to avenge their insults. Moreover, a ruder people than the Saracens came into power, namely, the Turks, and their actions roused the Christians to great indignation.

The most important man in Christendom was, of course, the Pope, and he felt that he must do something about this shameful treatment of the pilgrims. So he called a great council, where he gave a stirring talk to the multitude, begging knights and soldiers to give up fighting their fellow Christians at home and turn their arms against the infidels who were violating the Sepulcher of the Lord.

This was a very wonderful meeting. It was held in the year 1095, in the little French town of Cler-

mont, which was packed far beyond its outskirts with the people who had traveled from England, Germany, and Italy to take part in it. The Pope was the most splendid person present, in his gorgeous robes, but the lords and peasants forgot him in their interest in the worn, tattered, fanatical figure of a little man by his side.

This man who held the crowd breathless was called Peter the Hermit, and he had just returned from the Holy Land. He told them with sobs and tears of his sad adventures in Palestine. He related how he had seen the Holy Places profaned and mocked and Christians loaded with chains and sent into slavery or beaten with rods.

As he finished his story, he raised his bowed head and cried:

“Men of Christendom, I tell you, these things shall end. I have had a vision, and in that holy place itself I heard the voice of God saying, ‘Arise, Peter, go hasten to thine own land and call upon the people, telling them what thou hast seen. The time has come when my holy city shall be cleansed and my people saved.’ Arm yourselves, therefore, ye men of Christendom, and prepare for war, for these things shall not be.”

As Peter sank back, worn with emotion, the Pope arose and said to the weeping multitude:

“Yes, brethren, weep for your sins and for this evil that has come upon Christendom. But weeping is not enough. Christian warriors, arise! Too long you have sold your swords to him who would offer you a chance to fight and cared not for what cause you battled. Too long you have

been a terror to your fellow citizens because you forgot the purpose of your knighthood and sought only for strife that you might display your prowess. Today the knights of Christendom have found a true cause to defend. Go and fight against the barbarians for the deliverance of the Holy Places."

When the Pope had finished, all present cried with a great voice like the roaring of the sea:

"God wills it, God wills it!"

"Yes, God wills it," replied the Pope. "Let these words be your war cry and the cross your symbol." And the enthusiastic people cried, "The cross, give us the cross!"

Then the crowd surged forward, and a red cross was pinned on every one's shoulder. To each of these persons was given the name of "crusader," or "bearer of the cross," and each vowed to go to Palestine and rescue the Sepulcher of the Lord from the Turks.

No movement was ever more popular. For several centuries each generation saw at least one great army of crusaders start for the Holy Land to fight for the cross. Not only did knights go, but peasants left their crops and lords their castles, and kings left their kingdoms, and even women and children undertook that long and dangerous journey.

After the Council of Clermont, Peter the Hermit recruited thousands of people of all ranks and conditions, all blindly longing to rescue the Holy Sepulcher, and all equally confident that nothing was needed but zeal and that God would lead them to victory. Of preparedness, not a word was said.



Godfrey of Bouillon. (From a fifteenth-century engraving.)

As Peter the Hermit was no general, the first attempt was a failure. But there arose a great leader in the person of Godfrey of Bouillon, who was famous for his purity of life and knightly valor

and who was also a practical warrior. He gathered money and soldiers and started for the Holy Land. And he really got there. Today in Jerusalem the tourist is shown the sword of Godfrey of Bouillon, who with his knights conquered the Turks and ruled in Jerusalem one year. Then Godfrey, King of Jerusalem, died, leaving a great name.

The Turks had a great advantage over the Christians, for they were in their own land. Moreover, they were splendid fighters. So the Christians could not hold the city long. Other crusades followed Duke Godfrey's, and still others—an endless stream of European warriors going eastward. A few of these warriors returned full of honors.

The second great crusade was particularly brilliant, for it was led by three kings—Richard the Lion-hearted of England, Frederick Barbarossa of Germany, and Philip Augustus of France. Although it did not result in a great victory, it made terms by which the Christian pilgrims were allowed to visit Jerusalem in safety and comfort.

By and by it became plain that the Christians could not take and hold Jerusalem, and the crusades gradually died out. The last of the knights to enter into a crusade with the old religious fervor was the French king, Louis the Ninth, in 1248.

Louis was a romantic and in some ways a tragic figure, for his ideas were those of the olden knight, and they did not fit into the modern world into which he was born. Yet every French child inherits the fragrant tradition of the devoted and unselfish life of the saintly king.

When Louis was but twelve years old, his father

died and Louis had suddenly to grow up and become king.

Two weeks after his father's death, the child was knighted. He was taken to Rheims for the ceremonies, and there, bare-footed and white-robed, he kept his solemn vigil in the great empty cathedral. When he had taken his oath of knighthood and had sworn to be faithful to God and the Church and to deal justly with his people, he went through the ceremony of coronation. He was anointed with holy oil, the scepter of power was put in his right hand and the little rod of mercy in his left, and the crown of France was set on his brow.

But the child was not left to rule alone. Queen Blanche, his wise and strong mother, really ruled the land, and she brought up the royal boy with great strictness, even letting his tutor whip him when it was thought that he needed it. Louis was very much devoted to his mother and a credit to her training.

When he himself came to rule, he was firm in standing for the rights of France but was always tender to the poor and afflicted. It was said that he used to hold his court of justice out of doors under a spreading tree, where all might come to him freely with their petitions. He was saintly from his youth, spending so much time in prayer that his prime minister once rebuked him for it.

Of course, the crusades interested him intensely, and he longed to take part in them, but his ministers discouraged it. One day a terrible illness fell upon him. In all the churches the people prayed for

him and his devoted subjects were in despair. He lay for a time unconscious, and all thought him dying. Suddenly his feeble voice was heard, saying:



Reproduction of an old engraving showing the army of Louis the Ninth embarking for the Holy Land. The Turks are seen on the opposite shore.

“God hath brought me back from the shadow of death.”

Shortly after, he asked that the cross of a crusader be laid on his breast. When he had recovered his health, he insisted that now he must go to the Holy Land, and no one could dissuade him.

He gathered together many knights who were willing to accompany him. But when still he had not enough followers, he played a trick on his courtiers. On Christmas morning in a dark church he presented them all with handsome cloaks. They put them on, and when they came into the light they saw that the red cross was on their shoulders. So they laughed good-naturedly and became crusaders.

The start from the south of France was very picturesque. A rainbow fleet of ships with scarlet, green, and golden sails rode out of the harbor amid the shouts of the populace.

But, alas, the crusade was a failure. The Saracens at length captured the little French army and offered to the knights the choice between becoming Mohammedans and being killed. One by one the soldiers fell rather than desert their religion. Louis wished to be a martyr too, but of course a king cannot be allowed to sacrifice himself. France ransomed him for a huge price, and he returned sadly to his country.



A fourteenth-century picture of horsemen carrying the banners of the Church and of the Empire of Charles the Fifth of France.

Seventeen years later, Louis attempted a second crusade. He was so feeble when it started that he had to be carried by two men. It is small wonder that he died in that far-away country. The last prayer of the blameless king was not for himself but for his people. He made this prayer:

“Lord, have pity on thy people whom I have led here. Send them to their homes in safety. Let them not fall into the hands of their enemies, nor let them be forced to deny thy Holy Name.”

So died Saint Louis, and with him died the crusades.



The Modern Crusaders

*Who is the happy Warrior? Who is he
That every man in arms should wish to be?
—It is the generous Spirit, who, when brought
Among the tasks of real life, hath wrought
Upon the plan that pleased his boyish thought:
Whose high endeavors are an inward light
That makes the path before him always bright.
This is the happy Warrior; this is He
That every Man in arms should wish to be.*

THE old crusades are ended. No more does the armor-clad knight with the red cross on his shoulder travel over land and sea to engage in mortal combat with the Saracen. But there are many other evils to fight in our day, and so there is still need of knightly folk.

The word "crusade" has come to mean any effort made by a group to combat evil or to fight for a good cause. Men and women who want to make the world better often join in such crusades.

For boys and girls, too, there is a great crusade called the *Modern Health Crusade*. Those who join this wide movement do not need to leave their homes and wander to distant lands, but may

fight at home in their own towns. They do not encounter fierce warriors in coats of mail, or dragons breathing fire. But putting on the armor of faith and courage, they fight the dragon of disease and strive for good health. Today as always, he is the best knight who keeps himself clean and strong that he may be of the greatest use to others. Clean homes, clean towns, and strong citizens are worth fighting for.

Millions of children all over America and in some foreign countries have joined in this crusade. Thousands of boys and girls each year take part in national health tournaments, in which the classes all over the country contend for the pennants and banners that reward faithful fulfillment of the ideals of the Health Knight.

The boys and girls who join the Modern Health Crusaders first become pages; for a time they must pass through a period of probation, to see whether they will do the daily tasks that are demanded of them. If they are faithful in these, their names are written on the Roll of Health Knighthood, and they rank as squires.

Like the youth of the Middle Ages, the squires, before they can become knights, have to serve their time and prove their constancy by following the rules of the order. When they have done this they are made knights, and then for further service they may become knights-banneret. Of course, not all these crusaders attain knighthood; but many, many of them do. Attractive insignia are given to the knights and knights-banneret, and on special occasions a crusading costume (a

white cloak with a red cross on the shoulder and a cardboard helmet with a visor) is worn by each faithful knight.

The ceremony of bestowing the accolade on the boys and girls who are ready for knighthood is a very pretty sight.

The highest honor that can be given to a Modern Health Crusader is to admit him to the Round Table. The knight-banneret who joins the Round Table must exemplify the nobility of health, both physical and moral. Those who are ready for this advancement study hygiene and try to develop bodily and athletic fitness.

Their scroll of membership reads:

*The Order is founded anew, as of Arthur, to be
"A glorious company, the flower of men,
To serve as model for the mighty world,
And be the fair beginning of a time"
Of constant health in all America.*

These modern crusaders are like the old knights in many of their ideals. When Sir Galahad fought against forces that threatened to be too strong for him, he said:

*My strength is as the strength of ten
Because my heart is pure.*

The crusader today needs the same purity of heart and cleanness of body that marked Sir Galahad; the same desire to be helpful to others that King Arthur showed in his care for his people; the same knowledge and practical wisdom that made Godfrey of so great service in his time. He needs the courage of Saint George; the courtesy, generosity, and helpfulness to those weaker than he that



A Modern Health Crusader receiving the accolade.

made Sir Lancelot so great a knight. He may have a chance to prove himself as loyal in friendship as Roland and Oliver. And he must also recognize that modern crusades, even if not so picturesque as those to the Holy Land, are just as worthy a boy's or a girl's valor.

The modern crusaders show their knightliness by daily carrying out the simple rules of health, but like the ancient knights they make themselves strong to serve. The knightly ideals held in common by the iron men of olden times and the youthful knights of our own day are well set forth in a French ballad that has been put into English in this way:

*Amend your lives; ye who would fain
The order of the knights attain,
Devoutly watch, devoutly pray.
From sin and pride, oh, turn away;
Shun all that's base, the truth defend;
Be the widow's and the orphan's friend;
Be good and leal, take naught by might;
Be bold and guard the people's right;—
This is the rule for the gallant knight.*

*Be meek of heart; work day by day;
Tread, ever tread the knightly way;
Make lawful war, long travel dare;
Tourney and joust for lady fair;
To everlasting honor cling,
That none the barbs of blame may fling.
Be never slack in work or fight;
Be ever leal in self's own sight;—
This is the rule for the gallant knight.*

*Love the liege lord; with might and main
His rights above all else maintain.
Be open-handed, just and true;
The paths of upright men pursue.
No deaf ear to their precepts turn;
The prowess of the valiant learn;
That we may do things great and bright,
As did great Alexander hight;—
This is the rule for the gallant knight.*

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*Louis Pasteur, who did
more than any other
man to point out the
way germ diseases may
be prevented.*

Modern Health Crusade



Roll of Health Knighthood

Date control began Sept. 10th 1910



CANDIDATES		MODERN HEALTH CRUSADERS					PUPILS' WEIGHT RECORD														
NAME OF PUPIL	AGES	SCORES	EMERITS	EMERITS	EMERITS	EMERITS	AGE	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	
1. <i>George Brown</i>		★	★	★	★	★	25	★	12	12	63	62	64	64	68	69	70	71	71	72	73
2. <i>Helena Benson</i>		★	★	★	★	★	30	★	11	10	60	61	63	63	64	65	66	67	68	68	68
3. <i>Clara Clark</i>		★	★	★	★	★	28	★	9	34	41	45	48	50	50	51	52	53	53	53	53

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The

MODERN HEALTH CRUSADE

A National Program of Health Instruction in Schools

MANUAL FOR TEACHERS,
SUPERINTENDENTS AND HEALTH WORKERS

Fourth Edition



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I. INTRODUCTION

1. A SCHOOL PROGRAM

In 1917 a circular, "Record of Health Chores," made its first appearance. The chores were hygienic duties through the performance of which children would become "Modern Health Crusaders." Since then more than 6,000,000 Crusader pages have enlisted to become squires, knights and knights banneret in health chivalry, and the Crusade system of instruction has been adopted by thousands of schools. A number of state boards of education have prescribed it for the schools.

It is the desire of the National Tuberculosis Association, the founders of the movement, to contribute the Crusade to the elementary and secondary schools of the country. It presents the Crusade as a practical system of teaching health truths, a system that *imparts* health habits and creates active interest in public as well as personal health.

The program is elastic and amenable to change. If a school allows no time for hygiene, its teachers may nevertheless give their pupils the benefit of the fundamental and necessary part of the program indicated in this manual. On the other hand, for schools that consider it a duty to train their pupils in health, the Crusade offers its entire program, fundamental and advanced, to be carried out in the curriculum to whatever extent the schools elect.

The program affords a progression for children from enlistment as Crusaders to qualifying for the Round Table and to community sanitation work. As indicated in the table of contents, the program of the Crusade is divided into Fundamental Program, a Necessary Part, b Auxiliary Part; and Advanced Program. So far as a school finds it necessary to omit features of the program, it is suggested that, after the necessary part of the fundamental program, preference be given to tournaments, hygienic inspection and health clubs in the auxiliary part, and to the Round Table in the advanced program.



2. A PHENOMENON

When boys and girls, in all states of the Union and in foreign countries in three continents, take up the systematic performance of "health chores" and enthusiastically join the Crusade movement, a phenomenon is presented that invites explanation. The health chores have of themselves no attraction for the average child; they are to him odious duties, performed only under social or parental pressure.

Good reasons for doing hygienic duties are set forth attractively in the modern type of school textbook. No set of facts to be learned in school has greater value, but usually the pupil fails to translate this knowledge into his own conduct except under outside influences. "Education among us consists too much in telling and not enough in training." The Modern Health Crusade brings into the schools a distinct influence serving to reinforce established courses in hygiene, physiology, physical training and sanitation. It does not conflict with such courses but adds vitality.

Personal and community health is the object of these courses. Health is not so much a matter of extensive *knowledge* of facts as of *will* to comply with a few simple laws from day to day until compliance becomes habitual. The Crusade system supplies the will by *interesting* the child.

3. UNDERLYING PRINCIPLES AND PEDAGOGY

The value of health, the *direct* motive, is not sufficient to arouse the child's will. Investigations by Dr. Thomas D. Wood have shown that children are not interested in health in the abstract or as a future benefit. An adult seldom values health sufficiently to follow

its laws closely until sickness makes health sorely missed. An *indirect* motive—the “mediate interest” of Professor Charters—is important for the adult and indispensable for the child. The Crusade supplies the child with a powerful indirect motive for patient work in acquiring good health habits.

In providing the motive the Crusade utilizes various principles of child psychology. It introduces the play element into the practice of hygiene. It transfers the romance of the medieval crusades to a vital present-day quest. It holds up to children the chivalry of health. It dramatizes the pursuit of health. The Crusade allows the child to follow his imitative instinct. It makes him feel—and rightly—that he is of some importance and that he is taking an active part in a great movement. The Crusade makes an instant appeal to the child through its titles and badges, all won by his own achievement. It interests him in its competitions. It provides Dr. Burnham’s “stimulus of success” for children in large numbers, not for a single prize winner who succeeds while all his mates must fail.

Opportunity to belong to a *national* crusade appeals strongly to the child. He finds an outlet for patriotic aspirations. He has incentive to do his part to assure the country that in another draft for war one person out of three shall not be rejected for physical defects: due to bad health habits.

“The primary aim of elementary education is the formation of habits of good physical and mental conduct.” The Crusade applies to the pupil the pedagogical principle of learning by doing. Habits are formed while reasons are being learned. As in Alice in Wonderland, “the best way to explain it is to do it.” The Crusade is a project method.

4. NATIONAL EDUCATION ASSOCIATION

The following resolution was adopted at the annual meeting of the National Education Association in the Department of Physical Education in 1919:

“Whereas, effective health instruction of children depends not only upon their knowledge of the laws of health, but more especially upon the inculcation of habits of right living, and

“Whereas, the Modern Health Crusade system of instruction provides an incentive for the child to acquire health habits,

“Be it resolved, that the National Education Association recommends the adoption by the elementary schools of such a system of health instruction as the Modern Health Crusade.”

5. RESULTS

The results of the Modern Health Crusade are physical and moral improvement of children and the prevention of disease. Largely home work, the Crusade links the home and the school and, reaching beyond the children, teaches the parents. For the child, the Crusade contributes a needed drill in truthfulness, regularity in duty, and education of the will. The method of recording performance of the chores, under which the child is put on his honor to choose between right and wrong statements, affords an ethical discipline comparable in value to the physical discipline. The Crusade awakens responsibility for community welfare and makes the teacher’s work lighter by keeping the children’s minds alert and by promoting both attention and attendance.

The following quotations are from letters written by school superintendents, state, city and rural:

“The whole work of the Crusade is practical and wholesome and no child participating can help being benefited.”

“The movement rapidly gained the support of the teaching force and the grade officials, all of whom endorsed it in very positive terms as productive of marked good.”

“The teachers in charge are all delighted with the work and do not hesitate to say that colds and usual epidemics are lacking where the health chores have been kept up.”

“After a few weeks of the Crusade, I regard the results as superior to a year of physiology as ordinarily taught.”

(From a superintendent who was skeptical) “I presented the matter at the teachers’ meeting in a half-hearted way. It was presented to the pupils the next day. Imagine my surprise when I reached home to find my own children as enthusiastic as they had ever been over Christmas! * * * Mothers stopped me on the street to thank me for making it so easy for them to keep their children clean and for leading them to form good habits that had seemed impossible before.”

6. SCOPE

The Modern Health Crusade is directed broadly to the upbuilding of health. Its campaign is not limited to tuberculosis or any particular diseases. While the Crusade is essentially a system of instruction, to the Crusaders it has the appeal of an organization. Schools taking up Crusade work do not, however, assume membership obligation in any organization. Such organization as is suggested in this manual is optional with school authorities and is designed to appeal to children, giving them mass stimulus to health activities.

10. RECORDING PERFORMANCE

A score card, with spaces ruled after the eleven chores, is provided on each chore record, sufficient for recording performance over five weeks. Full directions for making entry of the total number of chores done each week are printed on the record. The pupil signs the standard and senior records. A parent or guardian signs the primary and standard records. The teacher or other adult leader must approve each record for the pupil to become a Crusader or acquire any title. The teacher is privileged to set standards of excellence to be demanded in performance of the chores. The record is preferably kept at home, tacked up on a door, until it is ready for the teacher's inspection.

11. TITLES IN HEALTH CHIVALRY

Seventy-two chores (standard or primary) done in one week make a perfect score. This requires each of the first ten chores to be done daily and baths taken on two days. To become a Crusader the candidate must make a score at least 75 per cent. perfect in each of five weeks. This requires the performance of 54 chores. (76 is the perfect score for the senior chores. The eleventh chore, the bath, is done on six days. 57 makes the required 75 per cent.) On becoming a Crusader the pupil receives the certificate of enrollment and the rank of squire. The title and badge of knight is won by doing 75 per cent. or more of the chores for each week through 5 weeks after becoming squire, a total of 10 weeks; and the title and badge of knight banneret, through 5 weeks after becoming knight, a total of 15 weeks. On beginning the chores the candidate for Crusader is a page.



12. REPORTING TO TEACHER

The children bring their chore records from home, for the teacher to note their performance of chores, after the five weeks required for earning each successive title, or oftener as directed. In addition to the award of rank and badge, schools in many states give pupils credits in school marks. (See "School Credits," § 37.) The teacher hands a second record to the child on receipt of the first record sheet. Thus the three records required for a fifteen-week course should be provided at the start.

To count for a title, the weeks in which the chores are done need not be consecutive. But children should be stimulated by contests and tournaments to let no week pass without a good record. The wall chart, "Roll of Health Knighthood," serves for posting competitively the progress of the pupils. (See §§ 25-29.)

13. PERIOD OF MEMBERSHIP

The membership of each Modern Health Crusader, page, squire, knight and knight banneret, covers the remainder of the school year after the date of issue for the certificate of enrollment and subsequent months to the end of the calendar year. The certificate of enrollment issued in the fall term accordingly applies to more than twelve months.

14. CERTIFICATE OF ENROLLMENT

The certificate states that the boy or girl named therein has agreed to try (1) to keep the Crusaders' health rules until the end of 192., (2) to do nothing that may hurt the health of any other person, and (3) to help keep home and town clean; has done at least 75 per cent. of the Crusaders' health chores for the number of weeks required for first honors in health knighthood; and, therefore, is enrolled throughout the year 192. as a Modern Health Crusader with the rank of squire.

The certificate carries educational matter, attractively printed. It contains the Rules of Modern Health Crusaders, a set of instructions which are the basis for the chores. Brief directions on diet are included.

N. B. The reader is invited to apply for sample copies of all Modern Health Crusade publications referred to in this manual, addressing the association for his state listed on the back page.



15. BADGES

The badges for squires, knights and knights banneret are buttons or pins in colors and novel designs. Manufacture in millions has produced beautiful badges at the low prices

quoted in this manual. Designs are changed each year, thereby supplying one of the varied incentives offered children to repeat a Crusade course year after year. The teacher may appeal to the child's pride and instinct for collecting to earn a series of Crusade badges over several years. The progression in rank from page to knight banneret is denoted by one, two, three and four stars printed on the certificate and badges. The insignia should be presented by the school free like diplomas, to pupils who earn them.

16. TWENTY AND THIRTY-WEEK COURSES

In schools that conduct the Crusade course for a total of thirty weeks or more in one school year, pupils continuing to do 75 per cent. of the chores after the fifteen weeks required for rank of knight banneret earn titles of advanced order. On the completion of the twentieth and of the thirtieth week the Crusader becomes knight, advanced order, and knight banneret, advanced order, respectively, has the right to write the honorary initials "A. O." after his title, and is entitled to wear underneath his badge a ribbon in red or purple. For a course as long as thirty weeks a school may elect to award the titles and certificate and badges of squire, knight and knight banneret only after 10, 20 and 30 weeks, respectively. In that case, the titles are all advanced order. The teacher should write "Advanced Order" after "Squire" on the certificate of enrollment.

17. FINANCES

The expense of Crusade work is very low. The approximate cost per child for a 15-week course is from $3\frac{1}{2}$ to 7 cents. The variation depends on whether 80 or 100 per cent. of the children win the knight banneret badge, and on whether the celluloid button or the gold pin be selected for that badge. It is assumed that all the children win the squire certificate and the knight button, and that there is one teacher to every 25 pupils. These cost figures cover all the supplies and insignia for child, teacher and classroom required both for conducting the chores and participating in tournaments (optional). For a 30-week course the approximate cost similarly varies from $4\frac{3}{4}$ to $10\frac{3}{4}$ cents per child. The latter figure assumes the optional gift of both the gold pin and the Advanced Order ribbon to all children.

A comparison of the cost of Crusade material with the cost of textbooks justifies schools in purchasing Crusade material along with their other supplies. (The Crusade material is not intended to take the place of any practical textbook on hygiene. It supplements and enhances the value of all such books.)

The number of schools meeting the expense of Crusade courses has multiplied rapidly. The national and state tuberculosis associations and the Junior Red Cross, the organizations that met the expense almost entirely in the early development of the Crusade, cannot, from limited funds contributed for various lines of philanthropy, permanently meet the expense of a movement best conducted by the schools.

If the schools of a community cannot purchase Crusade material, state or local tuberculosis and health associations may be requested to provide them. Expenses are met by various local organizations, such as chambers of commerce, parent-teacher associations, patriotic organizations and women's clubs. A Junior Red Cross group earned more than twice the cost of Crusade work in its community by charging 15 cents admission to its presentation of the Crusade playlet, "King Good Health Wins." (See "Playlets," § 47.) "Community suppers" have proved successful in financing Crusade work. Money has been raised by inviting certain adults to join a local Crusade club or league as honorary members with dues of from one to ten dollars. The formation of a local Crusade council (See "Councils," § 44) is very helpful in securing the financing of Crusade work either with school funds or otherwise.

18. DISTRIBUTORS OF SUPPLIES

The general distributor of Modern Health Crusade supplies of every form throughout each state is the tuberculosis or health association for that state listed on the last page of this manual. Prices are quoted in the following paragraph. Orders should be placed with the state association or the association affiliated with it for the county or city in which the school is located. Sample copies of printed matter are sent free to applicants within the state. The National Association will mail a complete set of sample copies, including this manual, on receipt of 5c. postage.

19. PRICES OF SUPPLIES—QUANTITIES NEEDED

The prices given here are subject to change without notice, but all goods will be sold as low as possible. Prices cover transportation within the state, ordinarily. Prices are pro-rata in quantities less than thousands or hundreds. The word printed in *bold-face* type in the name of each article of supply is the code term for ordering by telegraph.

Article and Quantity Needed

Approximate Price

Standard chore record, 3 for each pupil, per thousand.....	\$2.75
Primary chore record, 3 for each pupil, per thousand.....	2.75
Senior chore record, 3 for each pupil, per thousand.....	2.75
Certificate of enrollment, 1 for each pupil, per thousand.....	4.50
Knight button, 6 to 10 for 10 pupils, per thousand.....	6.50
Knight Banneret gold pin, 5 to 10 for 10 pupils, per thousand.....	40.00
Knight Banneret celluloid button, 5 to 10 for 10 pupils, per thousand.....	14.00
Advanced Order ribbon, 4 to 8 for 10 pupils, per thousand.....	30.00
Brief explanation circular, 1 for each teacher, per hundred.....	.50
Manual, * per hundred.....	5.00
Prompter and hygienic inspection blank (See that paragraph), per hundred.....	.48
Tournament guide, 1 for each teacher, per hundred.....	.40
Tournament report form, 2 for each class, per hundred.....	.38
Roll of Health Knighthood and Weight Record chart, 1 for each class (or for 40 pupils), per hundred.....	3.20
Round Table report, 2 for each class for a year, per hundred.....	1.35
Round Table certificate, 1 for each pupil qualifying, per hundred.....	5.00
Round Table pin, 1 for each pupil qualifying, each.....	.30
Keep Well Guide chart (22½x34), 1 for each class, per hundred.....	20.00
100-per cent. Knight Banneret banner (22x24½), each.....	3.00
M. H. C. pennant, wool (15x36), each.....	1.30
M. H. C. pennant, paper (red and white, 15x36), in packages of 25 only, per package.....	1.50
M. H. C. panels (National Child Welfare Assn.), per set (12 panels).....	9.00
Commission (wall certificate for 50% knights banneret or 75% knights), per hundred.....	1.10
Standing posture chart (19x27), 1 for each class, per hundred.....	18.00
(American Posture League, 25c. each for quantities less than 25)	
Ellis Parker Butler story on Crusade, per hundred.....	.55
Playlets, pageants, songs (Prices on inquiry).	
The M. H. C. song, words and music, per hundred.....	.35
Hygiene posters (Chicago Tuberculosis Institute), per set (9 posters).....	1.00

The quantities enumerated are for a 15-week course, except in case of charts and material, like the manual, manifestly for longer use. For a 30-week course two "rolls" and two "reports" are necessary. Six "standards" (or "seniors" or "primaries") per pupil are required. Ten per cent. may be added to all orders of chore records to allow for losses. One "certificate" and set of badges can be made to answer under the plan of Advanced Order titles when the 30-week course is decided on from the start, but when the insignia are distributed during the first 15 weeks the Advanced Order ribbon should be awarded at the end of the second 15 weeks. Some schools awarding the Knight Banneret celluloid button after 15 weeks, make the gold pin the award for Knight Banneret, A. O.



The chart, "Keep Well Guide for Every Day," listed above, has unusual educative value. It is made of durable paper, tinned at top and bottom, and is printed in colors on both sides.

* A teacher does not require both the manual and the brief circular. The "brief" is intended for any teacher who will not find the time to read the manual.

A time schedule of hygienic duties, covering the Crusade chores, is featured on one side under the headings, Morning, Forenoon, Noon, Afternoon, Evening, All Day, while a pleasing cartoon presents a dietary incidentally. The other side features a dietary under the headings, Breakfast, Dinner, Supper or Lunch, The Best Foods and Foods to Avoid, while in the border eleven drawings of a high type of art illustrate the chores. The teacher is instructed, in a fine-print notice, to expose the sides alternately a month at a time.

20. MONTHLY BULLETIN

Developments in the Modern Health Crusade are described each month in a special section of the Bulletin of the National Tuberculosis Association. Photographs, reports of experiences, and suggestions for instruction, entertainments and community service make the Bulletin a valuable help in Crusade work. It is sent free to teachers who apply for it individually.

21. HOW TO START

All the material for the course should be secured in advance except that the badges for knights banneret may be ordered later when the number needed can be more accurately forecast. The badges may be ordered, at least tentatively, three or four weeks before the pupils earn them, to make sure that the expectant Crusaders be not kept waiting.

The teacher should first give a short talk to all the children in the class, setting forth the privilege of being Crusaders, and describing the way to become Crusaders, their honors and insignia and service to their country. Children will be interested in a comparison with the Children's Crusade in the Middle Ages. If the school is entering a tournament (See "Tournaments," § 26) children can readily be enthused over the chance to win victory for the school.

Each child should then be given a chore record to take home and to bring back on a set day after the lapse of five calendar weeks in which to check performances of chores. As soon as the teacher has looked over the records, certificates of enrollment should be given to the pupils whose records she approves. Both those whom she passes as squires and those whose records she vetoes as inadequate or as exaggerated statements should be instructed to continue keeping their records.

After five more weeks records are to be brought again to the teacher. Pupils who failed to become squires after five weeks are now rewarded with certificates, or the teacher may give them out before, as soon as earned. The knight's badges are awarded to the pupils credited with due performance of the chores for the ten weeks. Similarly, the pupils bring their chore records for examination by the teacher after a third five-week period, for her to confer the titles and badges of knight banneret.

The primary chore records may be kept at school all the time, provided that the teacher or the child under her direction and in response to her questioning check off each day his performance for the preceding day (on Monday for Friday, Saturday and Sunday), and provided that under daily hygienic inspection the teacher or pupil monitors verify performance of all chores subject to inspection. (See "Prompting" and "Inspection," §§ 31-33.) For the influence the chore records have on parents and all the household—one of the unique benefits of the Crusade system—it is advisable to have another set of primary chore records kept at home.

22. AMOUNT OF TIME REQUIRED

However crowded the school day may be with studies of another nature, the teacher may give her pupils the benefit of the necessary part of the Crusade program with one explanatory talk and occasional sentence directions and redistribution of folders. The examination of records and distribution of insignia may be completed in a few minutes at the noon hour or after school three times in fifteen weeks. The necessary "bookkeeping" is negligible, and can be carried out with the regular attendance roll book.

The response of the children will make the teacher consider it to her interest as well as theirs to utilize more time in school for Crusade work than the above minimum. Participation in a tournament will require practically no more time than the enrollment of Crusaders. Daily prompting and inspection on the chores is profitable.

23. AID TO HYGIENE—COORDINATION WITH VARIOUS STUDIES

Teachers conducting textbook courses in hygiene, physiology and sanitation will find that taking time to direct their pupils in the performance of the Crusade chores will vitalize these courses. The chores and rules of the Crusade are the essence of hygiene. The application which successive portions of progressive textbooks like the following have to the several chores is apparent and should be cited by the teacher in each instance for the purpose of clinching knowledge derived from the books:

Overton, "Personal Hygiene," "General Hygiene." Davison, "Health Lessons." American Book Co.

Emerson and Betts, "Hygiene and Health," "Physiology and Hygiene." Bobbs-Merrill.
Haviland, "The Playhouse." J. B. Lippincott.
Gulick, "Hygiene Series." Ginn & Co.
Winslow, "Healthy Living." C. E. Merrill Co.
O'Shea and Kellogg, "Health Series." Macmillan.
Ritchie and Caldwell, "Primer of Hygiene." Ritchie, "Primer of Sanitation," "Primer of Physiology." World Book Co.

Schools are coordinating Crusade work with various studies, such as reading, composition and arithmetic, as well as the health studies. The National Association will refer principals to outlines or syllabi for use of teachers in coordinating the work. It will also refer normal schools and teachers' associations to speakers experienced in Crusade work, prepared to lecture or conduct institutes.

24. CRUSADE COURSES FROM YEAR TO YEAR

Every elementary school will find it profitable in health education and the improvement of pupils to repeat a course in Crusade chores each year for every grade, continuing for 15 or 30 weeks or the entire term. High schools should conduct the senior chores in at least one year. Numerous high schools have carried the drill to the twelfth grade.

Experience has shown that pupils will take up the work with new zest in successive years. Credits toward passing the grade should be allowed for Crusade work, so that in this respect it will be on a par with any other study. Interest is increased for both pupils and teachers by participation in national and local tournaments and in the cup competitions, to which every school is eligible. The Crusade pageants, accolades and playlets serve to enthuse pupils and teachers and to enlist the community. The right to take part or attend is often held out to pupils as reward for faithful work in the chores. The monthly Crusade entertainments similarly stimulate interest. These auxiliary and optional activities are described in subsequent sections.



A RURAL SCHOOL WINNER IN NATIONAL TOURNAMENT

The appeal of the badges is renewed for the child each year by changed designs. He takes pride in the collection of insignia of achievement. Promotion from the primary chores to the standard and then to the senior gratify his desire for growth.

By conducting the tests for the Round Table (See §§ 58-69) the school gives fresh incentive for Crusade work to pupils who became knights banneret in previous years. Mem-

bership is the highest distinction in the Modern Health Crusade. It is ordinarily for three years, but pupils who have earned the rank of knight banneret yearly five or more times and have qualified for a second membership in the Round Table become *Knights Constant of the Round Table*, the supreme rank of health chivalry. Thus a progression of knightly rewards is provided to assist schools in extending the unique motivation of the Crusade through as many grades as they deem necessary to make good health practices habitual.

If school authorities decide not to repeat the course for every grade each succeeding year, it is recommended that the course be conducted for at least two primary grades, two intermediate, one junior high and one high school grade.

III. FUNDAMENTAL PROGRAM

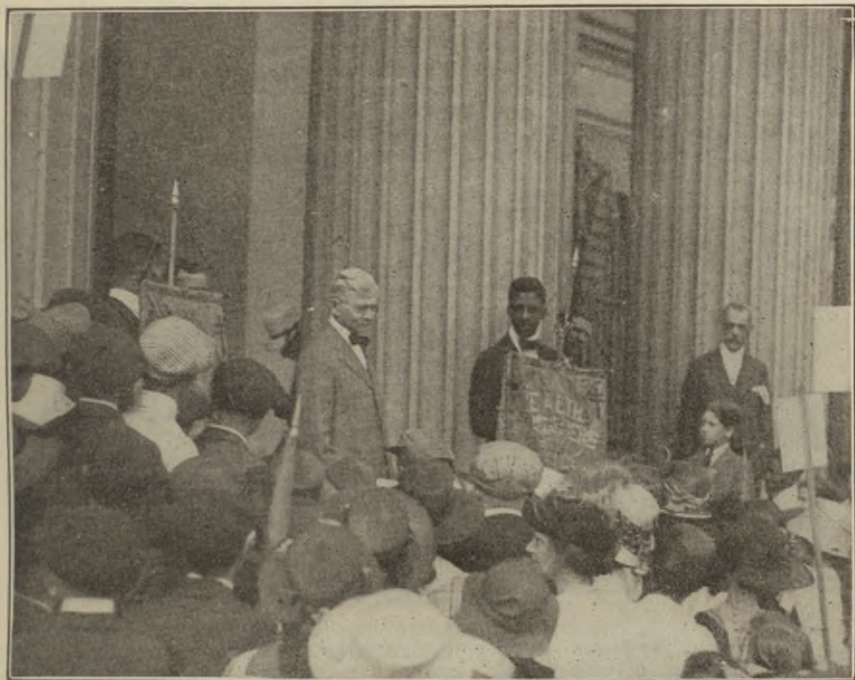
(b) Auxiliary Part

25. KNIGHTING CRUSADERS

The award of titles and presentation of badges should be carried out with ceremony. Crusade health teachings are probably imprinted for life on the minds of boys and girls who are formally dubbed knights and knights banneret. The event should be made an educational entertainment to which the public is invited. The newspapers should be given the story and the names of the knights. (For ceremonial, see "Accolade," § 53.)

26. TOURNAMENTS

The Modern Health Crusade was planned to *interest* children in health. Competition is one of the best means. The progress of knighthood is the basis of competition in the Crusade. Contests are conducted to enlist the most Crusaders who advance to high rank in a given time. These contests may be between rows within a class, between classes and schools, or between states. A tournament is a contest between classes (or schools), conducted for 10 or 15 weeks, the minimum number in which candidates may become knights or knights banneret.



VICE-PRESIDENT MARSHALL AWARDS BANNERS IN CRUSADE TOURNAMENT

National tournaments, conducted by the National Tuberculosis Association, are open to all schools and classes of the country between the first and the twelfth grades with an enrollment of not less than ten. On this modern "Field of the Cloth of Gold" contestants

are separated into eleven divisions so that the younger pupils need not compete with the older nor the larger classes with the smaller. Divisions 1 and 2 are ungraded schools, containing less than 19 pupils and those containing 19 or more pupils. Divisions 3 to 11 are classes grouped in grades and containing less than 26 or more than 25. Beautiful banners and pennants are awarded as prizes and extensive publicity is accorded.

The victor in each division is the class or school that makes the most progress toward the enrollment of all its pupils as knights banneret in 15 consecutive weeks. Progress is determined by crediting pupils for the performance of the health chores. Each pupil is credited 1 for each week in which he does the required 75 per cent. of the chores. The maximum credits he can earn are 15. The score of the class is determined by adding the credits of the pupils and dividing the sum by the number of pupils in the class during the first week. The highest score a class can earn is likewise 15. If competing classes have tie scores, the one whose pupils have performed the most chores, properly recorded, is adjudged the winner of the banner for its division. Pennants or other trophies are awarded to all schools with a credit of 15, properly reported. The 15 weeks must be consecutive except that one or two weeks which are occupied in whole or in part by vacation may intervene, making the total period not to exceed 16 or 17 consecutive weeks.

Two national tournaments are conducted during a school year. For the first, a class may submit its score over any 15 consecutive weeks that it chooses between the first Sunday in September and the last Saturday in February. For the second, it may choose any 15 consecutive weeks between the first Sunday in January and the second Saturday in June. A school may be a joustier in both tournaments, provided that the record for the same week in January or February be not submitted in both tournaments.

In many instances, state, county or city tournaments are conducted similarly for 10 or 15-week periods. The rules and official report form for a national tournament usually serve as well for a local tournament. Teachers should familiarize themselves with the rules published in the "tournament guide" circular.

27. INTER-STATE CUP CONTEST

Beautiful and costly trophies known as the Banneret Cup and the Inter-city Cup have been donated to be awarded to the schools of the state and of the city (over 100,000 inhabitants) in which the most children become knights banneret in ratio to school enrollment. The contests are conducted annually. The cups are awarded for one year, but become the permanent property of the state and city in which they are won three times, either consecutively or not. The cups are held in custody for the schools in the winning state and city by the state and city health association or board of education.

The children counted in this contest must become Modern Health Crusaders and advance to knights banneret between the first Sunday of September and the second Saturday of June in the following year. The fifteen weeks of chores need not be consecutive. The

CANDIDATES		MODERN HEALTH CRUSADERS										PUPILS' WEIGHT RECORD													
NAME OF PUPIL	AGES	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	AGE	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE			
1. George Ames		★	★	★	★	★	★	★	★	★	★	35	122	122	65	62	65	65	66	67	70	71	72	72	73
2. Helen Benson		★	★	★	★	★	★	★	★	★	★	30	115	60	61	63	63	64	65	66	65	66	66	66	66
3. Oliver Clark		★	★	★	★	★	★	★	★	★	★	28	93	85	81	75	78	80	80	81	82	80	81	82	83

school enrollments of the states shall be the figures last published by the U. S. Bureau of Education. Reports on the number of knights banneret are collected by the state association in accordance with the rules published by the National Association, and must be rendered to the National Association not later than July 15th. The award will be announced and the cup delivered not later than the opening week of the following school year.

The inter-state contest and the tournaments offer to every school conducting a Crusade course the double incentive of winning a banner for itself and helping to win the silver cup for its state or city.

28. ROLL OF HEALTH KNIGHTHOOD

The chart, "Roll of Health Knighthood" and pupils' weight record, is hung on the classroom wall. It serves to post the pupils' progress in knighthood and their weights from month to month, in comparison with normal weights. In the first column are spaces for the names of 40 pupils, all of whom should be listed there at the beginning of the Crusade course or tournament period. As soon as a boy or girl becomes a squire or reaches a higher rank, a star or other mark is placed as a reward in the column for each rank attained. Gilded stars in colors may be obtained of stationers. Green or yellow stars are used for squires, blue for knights, red or royal purple for knights banneret, silver for knights banneret, Advanced Order, and gold for Knights of the Round Table. Recognition may similarly, if the teacher wish, be given by entries on this chart to pupils who pass athletic, posture and nutrition tests for the Round Table. (See §§ 62-64.) Tables of normal weights are printed on the Roll.

29. COMMUNITY CONTESTS

As the senior chores are hygienic duties that should be observed by every adult, great interest may be aroused and great good accomplished by a competition to enlist the most Crusaders both of school and older ages within a community. The pupils of a class or school are divided for the contest into two groups substantially equal in number, range of age, and influence. A reward is offered to the side that shall enlist most Crusade squires, knights or knights banneret resident in the town or school district, within set periods, such as 6, 12 or 18 weeks. The pupils are given both senior and standard chore folders to distribute. Primary folders are also useful for securing youngest recruits. All persons not less than 6 years of age who meet the chore requirements (duly recorded) for their age are counted for the side that recruits them. A home that has taken up the performance of the chores may prevent further solicitation by pupils by posting a paper marked "M. H. C." at its door.

Following the practice in Washington, D. C., reports may be secured from each school on the number of squires, knights and knights banneret enlisted at the end of the five, ten and fifteen-week periods. The competitive standing of the schools, based on enlistment in ratio to enrollment, is published in the newspapers.

30. CURRICULUM REQUIREMENTS

As required by law in some states, elementary schools are coming more and more to set aside time in which the teachers shall remind pupils of daily health chores and inspect them to test observance of duties. In one state the following activities are required: (1) daily hygienic inspection (taking about ten minutes), (2) a two-minute drill in physical exercises at the beginning of a class, at least four times a day, (3) directed recreation (140 to 240 minutes per week), (4) formal gymnastics (60 minutes per week, in more than one period), and (5) instruction in hygiene (at least two periods of 10 or 15 minutes each per week). The National Tuberculosis Association will give further information on this subject to inquirers.

The Crusade promotes a realization of the wisdom of allotting time thus definitely in school hours for practical health instruction and physical training. The Crusade chores supply a basis for hygienic inspection and are in harmony with all of the above five requirements. The Crusade makes such requirements interesting both to teacher and pupil. The schools that are giving Crusade work credit in school marking are consistently furthering their other courses in health subjects. (See "School Credits," § 37.)

31. PROMPTING

A few minutes should be devoted to prompting and inspection at a scheduled hour each school day. The questions in the following list should first be asked the class. Each pupil who has done the chore in question holds up his hand. For question 5 he holds up his handkerchief.

How many of you, yesterday and so far today, have done chore—

1. Washed hands before each meal?
2. Washed face, ears and neck and* cleaned fingernails?
3. Kept fingers, pencils and unclean things out of mouth and nose?
4. Brushed teeth after breakfast and supper?*
5. Took ten deep breaths, were careful about spitting, etc., and have a handkerchief?
6. Had thirty minutes of play in open air? Tried hard to sit and stand straight?
7. Were in bed ten hours last night, windows open?
8. Drank four glasses of water and no tea or coffee?
9. Tried to eat only wholesome food and slowly, and attended to toilet?

10. Tried to be cheerful, straightforward, clean-minded, to be helpful and to be neat (clothes, shoes, hair, books and all things used)?

11. Had two full baths last week? One? (To be asked Monday.)

12. How many of you saw to it that the chores you did yesterday (and Friday and Saturday***) were checked up on your records?

*Questions may be readily modified to correspond to the primary chores.

***How many of you have each a toothbrush of his own, used by no one else?" (This question should be asked daily until all children have brushes.)

***To be included in question 12 on Monday.

For a small class the teacher alone asks the questions and notes the responses. For a large class she appoints a health chore inspector for each one or two rows to note the responses. In classes organized as Health Crusade clubs (see § 40) lieutenant and herald serve as inspectors and the captain asks the questions. A competition between rows, to be able to report greatest performance, is valuable. It is helpful to have the twelve questions displayed on the classroom wall, either written on the blackboard or printed on a chart. (Particulars furnished by National Association.)

32. PROMPTER AND HYGIENIC INSPECTION BLANK

The form published by the National Association for use in prompting and in inspection contains the questions and a table of spaces in which the findings from both questioning and inspection, or either of them, may be readily and quickly entered. The best method is to enter only the omissions in performance as shown by hands not raised or by inspection. The number of the chore not performed is entered, also "12" for the last question. The teacher quickly associates each chore with its number. Even though no record be kept for the answers to the questions, they should nevertheless be asked as reminders. Each blank will answer for 8 pupils over 4 weeks, or 16 pupils over 2 weeks. A blank should be provided for each chore inspector.

33. HYGIENIC INSPECTION

The number of schools practicing hygienic inspection has multiplied exceedingly rapidly. It is invaluable for the timely detection of disease that might spread through the school. The teacher can make the inspection on a number of points, while merely standing in front of the class. For the other points the teacher or inspectors chosen from the pupils pass down the rows, scrutinizing each pupil.



DAILY INSPECTION OF CHORE PERFORMANCE

The pupil's performance of chores 1, 2, 3, 4, 5, 6, 8 and 10—the accuracy of his answers to the questions on those chores—may be tested in whole or in part by the inspection or the teacher's observation at other times in school hours. Regarding chore 5, the possession of a handkerchief may be required as necessary preparation for protecting others, and the taking of ten deep breaths should be included in "two-minute setting-up exercises" in school. Play at recess is contributory evidence for a pupil's statement that he had the 30

minutes' play required by chore 6. Children should be drilled to drink at recess one of the glasses of water required by chore 8. Drowsiness may be considered evidence against any pupil holding up his hand to the question regarding ten hours in bed (chore 7). Bitten nails should be cited by the teacher as showing violation of chore 3.

Inspection on keeping neat (chore 10) includes cleanliness and orderliness of clothing and shoes. Coats, sweaters and rubbers are to be left where directed. Hair is to be combed and brushed. The shampoo must not be unknown. Pediculosis (nits) (removed by simple home treatment) should not be tolerated.

After the twelve questions have been asked, the class is called to attention. Sleeves are thrust up and hands placed on the desk, palms down. Hands and arms are inspected for dirtiness and rash; nails, for lack of cleaning and for biting. Nails should be cut and kept fairly short.

Teeth are displayed by drawing the lips well apart. Emphasis should be placed on cleanliness of teeth. A chart displaying a clean, even, healthy set of teeth may be hung on the classroom wall. Face, ears and neck are observed as the teacher passes from child to child, up and down the aisles. The child draws his collar slightly away from the neck and turns his head first to one side and then to the other. In many schools the teacher should once a week pull the hair up from above and behind the ears, the pupil holding his head forward, in order to detect uncleanness of scalp. For inspection of neatness of shoes, the pupils should turn in their seats, placing their feet on the floor in the aisle which receives the best light. The teacher observes the shoes from the head of each aisle. At least once a term the teacher should note the shoes that are incorrectly shaped and should explain the importance of preserving the natural shape and position of the foot. (See "Physical Examination," § 66.)

Failure to do a chore, detected by inspection, should be marked on the prompter and inspection blank by the number of the chore, in like manner as when the questions are asked.

When the primary chores are recorded in school instead of at home, the chore records may be checked at the period for prompting and inspection, instead of the inspection blank.

34. SYMPTOMS OF ILLNESS

Cases of contagion discovered by inspection should be referred for exclusion to the principal, school physician or nurse. Beside rash and pediculosis, watch should be maintained for eye discharge and the early signs of general illness. When unhygienic conditions are discovered the pupil may be spoken to privately after class and embarrassment avoided. Children who show evidences of extreme neglect should be referred to the school nurse or a public health nurse for home visits. In schools that have the service of a physician and nurse, their arrival at school should be announced to each teacher and all contagious or suspicious cases should be sent to the doctor's office, taking a reference slip from the teacher. Any deviation from the normal in a previously healthy child should be a warning to the teacher.

35. LIST OF SYMPTOMS

The beginning of most children's diseases shows one or more of the following symptoms. Depending upon the severity of the symptoms, the pupil should be separated from others and watched, sent to the doctor or nurse, or sent home to the parents with a written explanation and recommendation that the family physician be consulted.

Cough. (Children who sneeze or cough should be taken from their regular seats and isolated. This is most important, for many diseases are spread by sneezing and coughing.)

Sore throat or hoarseness. Running nose. Cheeks flushed. Fever. Chills. Pallor. Vomiting. Headache. Backache. Pain, especially in the abdomen or chest. Eruptions, rash, itching, irritation of the skin.

Red eyes, with or without discharge, especially if accompanied by any of the following symptoms of defective vision: scowling, squinting, headache, holding reading matter at an unusual distance from the eyes.

Running ears and deafness. Swelling in the neck, particularly if in the region of the ear. Shortness of breath. Chronic drowsiness (usually indicates poor ventilation or high temperature in the school room.) Chronic restlessness. Frequent requests to leave the room.

Malnutrition, loss of weight, mouth breathing, decayed teeth, irritability and disinclination to study or play are general symptoms indicating a condition favorable to disease.

36. WINDOW, THERMOMETER AND SANITARY INSPECTORS

The appointment of window and thermometer inspectors promotes class hygiene. Window inspectors open the windows freely before the two-minute drills or at the end of each class session on days when the windows are largely closed on account of cold, and close

the windows, immediately before studies are resumed, to the position at which a temperature of 68 degrees may be maintained. The duty of the thermometer inspector, when artificial heat is used or the windows are not fully open, is to record the temperature periodically morning and afternoon. When more than 68 degrees is registered he is to notify the teacher promptly and his record should be handed to her once a week.

The sanitary inspector reports to the teacher any unhealthful conditions found about the school during the week, such as unsanitary outhouses or lavatories, bad air, untidy halls, etc. The teacher may ask him to report to the class and have remedial measures discussed. Pupils can be made to feel it an honor to serve as inspectors of either kind. New ones should be appointed once a fortnight or at regular intervals.

37. SCHOOL CREDITS

The practice of giving school credits to pupils for doing Crusade work and to teachers for conducting it has become general. In some states teachers are authorized to credit pupils as high as 50 per cent. in physiology or hygiene for performance and recording of Crusade chores. In some instances 10 per cent. is added for Crusade work to credits for daily class work, and for excellence of work the Crusader pupils are excused from examination in physiology or hygiene. The Crusade credits are sometimes applied to civics.

In Illinois counties teachers are required to earn 200 professional credits each year as a condition for renewal or registration of certificates. In the majority of the counties the superintendents have agreed to give teachers from 10 to 50 professional credits for successfully supervising Crusade work. Some state school laws set requirements for "standard schools" and added requirements for "superior schools." Crusade work is a means of earning credits for classification as standard and superior schools.

State Superintendent Ethel E. Redfield of Idaho says "The Modern Health Crusade, which furnishes the indirect motive that secures results in health education, is the happiest type of organization that could be conceived. Standard school requirements laid down by the State Department of Education require of all schools participation in the Crusade as a part of the regular work."

38. TOOTHBRUSH DRILL

On account of lack of home instruction in the care of teeth, a toothbrush drill should be conducted in elementary classes at least once a term or as often as is necessary to teach all pupils. For the drill each child is requested to bring his brush wrapped in plain paper and remaining wrapped until the drill. If there are not cups for all the children, two or three provided with cups, water, dentifrice and a basin should demonstrate. The class should follow them or the teacher in pantomime. The cup, real or imaginary, is held in the left hand and the brush in the right. If a brush is lacking the child should go through the motions with his index finger outside his mouth. The brush should not be given very hard pressure.

Attention! (All in line, elbows close to side.)

1. *Ready*—Water.
2. Outside surfaces (Brush inserted under cheek. Gums as well as teeth to be brushed.)
 - a. "Upstairs"
 - Left side. Down strokes. 1 to 10.
 - Right side. Down strokes. 1 to 10.
 - Front. Down strokes. 1 to 10. Water.
 - b. "Downstairs"
 - Left side. Up strokes. 1 to 10.
 - Right side. Up strokes. 1 to 10.
 - Front. Up strokes. 1 to 10. Water.

The brushing of the upstairs and downstairs outside surface may be combined in a circular motion.

3. Inside surfaces. First (a) "upstairs" and then (b) "downstairs."
 - Left side. In and out motion. 1 to 10.
 - Right side. In and out motion. 1 to 10.
 - Front. In and out motion. 1 to 10. Water.
4. Chewing surfaces.
 - a. "Upstairs"
 - Left. Scrubbing motion. 1 to 10.
 - Right. Scrubbing motion. 1 to 10. Water.
 - b. "Downstairs"
 - Left. Scrubbing motion. 1 to 10.
 - Right. Scrubbing motion. 1 to 10. Water.

5. Empty cups and refill them.
6. Rinse the mouth.
7. Rinse the brush, shake off water, wrap it to take home.

Teeth should be brushed fully two minutes. It is important to work the bristles in between the teeth as far as possible. Dental floss used once a day, with care not to pull the gums back, will clean between teeth where bristles will not reach. A mouth wash can be made by adding to a pint of boiled water one teaspoonful of common salt and one table-spoonful of limewater. Pupils should be taught to consult a dentist every six months or oftener, to *prevent* trouble with teeth and resultant poor health.

39. SETTING-UP EXERCISES: TWO-MINUTE DRILL*

For grades 3 to 8.

At the sound of the bell, inspectors should open windows without command.

Coats and sweaters should be removed.

Class: Stand! (Face windows at once without command.)

1. Breathing. Four times.
In! Six counts for inhalation.
Out! Four counts for exhalation.
Right (left): Face!
2. Stretching. Four times. (This exercise must be done to response commands, using the cues indicated.)
Bend! Bend the trunk forward, touching hands to toes.
Shoulders! Stand erect, touching hands at sides of shoulders in passing to the next position.
Stretch! Stretch the arms upward, palms toward each other. Do not bend backward.
Higher! Make an effort to stretch higher.
Down! Turn hands and bring arms sideways downward quickly, without noise.
If the room is too crowded for the sideways downward movement, the arms may be brought down, close to the body.
3. Knee bending. Eight times. (Thumbs locked behind without command. This exercise should be taught, using the cues indicated. When it is thoroughly learned, it may be done to rhythmic commands.)
Down! Bend the knees deeply.
Up! Stretch the knees quickly.
Right (left): Face!
4. Breathing. Four times.
In! Six counts for inhalation.
Out! Four counts for exhalation.
Class: Sit!

*From Physical Training Syllabus, New York.

Teachers will find directions for other forms of physical exercise for a class in some of the textbooks. The National Association will refer inquiries to publications on gymnastic exercises, athletic drills, supervised play and games, in addition to the books named in this manual. (See "List of Books," § 57.)

ORGANIZATION

40. HEALTH CRUSADE CLUBS

Children like to *belong*. Beside general membership in the Modern Health Crusade definite membership in a health club gives boys and girls increased zeal and steadfastness in health work. The formation of a club does not come under the necessary part of the Crusade program, but is recommended to every class or school.

The teacher or principal explains to all the pupils that all who become Modern Health Crusaders will be members of the Grade Health Crusade Club or School Health Crusade Club. The plan of organization is distinctly democratic, only those pupils who fail to do the health chores to qualify as Crusaders being excluded from the club. Beside the qualifying pupils and the teacher, the club may include "honorary members" elected for service or for contributions to the treasury. A fixed minimum, e. g., \$5, should be set for contributions or dues from honorary members.

At a meeting five weeks after the chore folders are given out, preferably at the class session in hygiene or prompting and inspection, the pupils who become Crusaders adopt the constitution (See § 56) and elect officers. The chief officers are captain (president or health officer), one or two lieutenants (vice-president), herald (secretary), Crusade master (the teacher) and grand master (the principal). Inspectors—health, window and thermometer—are also officers, but usually serve for short terms (See § 36).

The Crusade master, who may be another adult if the teacher cannot serve, conducts the organizing meeting and selects nominees for officers and provides a copy of the constitution beforehand.

Each club should proclaim a slogan, like "War Against Disease," "Good Health for You and Me," "Strong and Clean, Body and Mind," "Every Health Chore a Good Health Habit," "Keep Vigorous to Withstand the Rigorous."

41. CLUB ACTIVITIES

The first activity of a club is to seek the membership of 100 per cent. of the pupils and to promote the members' progress in knighthood. Competition is an effective principle to follow. The club members should be divided into two numerically equal teams. They are determined preferably by classroom rows (entire or divided). Another method is for two leaders to choose the teams, making alternate choices of members, as is done for impromptu baseball teams. The leaders of the two teams should be the lieutenant and herald of the club. The class may, however, be divided into teams on beginning to do health chores, before officers have been elected or the club organized. Health inspectors appointed by the teacher serve then as leaders until the club is organized, after five weeks.

The teams compete to earn the most credits, i. e., to achieve the highest average rank in knighthood, in the periods of time required for the successive titles. (See explanation of credits under "Tournaments," § 26.) Simultaneously, a competition may be carried on between two or more clubs, representing as many classes or schools. For an idea of the interest to be aroused, read Ellis Parker Butler's story, "A Knight Without Reproach." (Mailed by the National Association on receipt of 3c. postage.)

The best procedure is to conduct daily prompting and hygienic inspection, as described above, with officers and team leaders assisting the teacher. When summoned by the teacher the captain comes forward and asks the twelve questions. The herald and lieutenant each have a prompter and inspection blank on which the names of the pupils of their respective teams are written, and make note of those who do not claim by uplifted hand to have done and recorded the chores. Inspection is then made, preferably by the teacher. It may be made by the herald and lieutenant. To avoid risk of partiality toward members of their own teams, they may each be assigned as inspector of the other's team, while the teacher is arbiter. An informal competition from week to week may be based on the records on the inspection blanks. On Monday of each week the captain should announce both the number of credits earned (one for each pupil in the team who did 75 per cent. of the chores for the preceding week) and the total number of chores done. Three contests should be conducted for five weeks each, the minimum successive periods for acquiring the knightly titles.

Other activities for a club are the entertainments and dramatic productions outlined below (See §§ 45-50), and participation in athletics and in training for the Round Table (See §§ 58-69). Clubs may challenge others to qualify the most members for seats at the Round Table.

42. COMMUNITY WORK

A club may make itself useful to the town in many ways. It may work for a sanitary drinking fountain in the school, a playground, fresh-air schoolrooms, ventilation for every room, clean streets, clean lavatories, etc. It may draw up a petition and agitate for physical examinations in schools, backed with nursing service. It may enter upon anti-fly and vermin campaigns, and aid in town clean-up. (See "Sanitation Campaigns," topic 67.) It may appeal for the enforcement of laws against spitting and the sale of tobacco to children. Committees may be appointed to report or to take action on exposed breeding places for flies and mosquitoes, on improvement of school premises, on sick children or on any of the various lines of work suggested in this manual.

43. NATIONAL AND STATE LEGIONS

As soon as 50 per cent. of the class or school become members of the Crusade club with the rank of knight banneret, or 75 per cent. with the rank of knight, the club is entitled to formal recognition as a component organization in the Legion of Modern Health Crusaders for its state and in the National Legion. The usual plan of recognition is to issue a commission certificate of membership or testimonial, suitable for schoolroom wall, on sub-

mission of a report giving the name of the club, the address of the school and the name of the Crusade master (teacher). Under this plan the directors of the state legion, i. e., the state health association affiliated with the National Tuberculosis Association, approve the report and issue the certificate in behalf both of itself and of the National Association, directors of the National Legion of Modern Health Crusaders.

44. CRUSADER COUNCIL

It has been found that a Crusader Council, composed of persons representing health, educational, commercial and other interests in a community, can be of great assistance in carrying the benefits of the Crusade to a whole community.

The most essential member of the Crusader Council is a Crusader Executive, the secretary and administrative director. For a county or large city the executive should be a salaried worker, woman or man. If the executive cannot be paid, a volunteer worker appointed by the parent-teacher association, chamber of commerce or some other organization can serve. The Crusader Executive is to initiate and oversee activities.

The other officers should include President—preferably superintendent of schools or his appointee, such as director of physical training—Treasurer, and chairman of personal hygiene, sanitation, publicity, local ordinances, chairmen for commerce and finance, medical and other professions, churches, parent-teacher association, women's club, labor organizations, fraternal organizations.

Membership should include men and women of influence in the fields represented by the chairmen, from whom committees may be formed under the chairmen as needed. Each Crusade master (teacher conducting Crusade work) and the captain, lieutenant and herald of each club should be members of the Council.

The committee on personal hygiene should include school officials, teachers, physician and nurse, and others who can go into the schools to assist. It arranges for the explaining and distribution of the health chore records, their inspection by teachers, and for stimulation through tournaments and contests, posters, exhibits, etc. The committee develops entertainments (See "Entertainments" below) as community affairs.

The functions of the committee on sanitation are explained under "Sanitation Campaigns," § 70. The local ordinance committee acquaints itself with ordinances, discovering whether they cover sanitation and health, whether practicable and enforced, and makes recommendations to the Council. A lawyer is a desirable chairman. The chairman of publicity cooperates with the various committees, giving the papers information in news form and keeping clergymen and all cooperative groups posted. The chairman of commerce and finance represents merchants, manufacturers and bankers.

If Crusade expenses are not met by school funds, the Crusader Executive, in cooperation with the president, treasurer and appropriate chairmen, raises the money through a Crusaders' entertainment, subscriptions by the chamber of commerce or other organizations, or dues for honorary membership in the league. (See "Finances," § 17.)

The Crusader Council meets once in sixty days and when a meeting is called by the president or the Crusader Executive. Reports shall be sent by the executive to the Council as often as once a month. A council may under its by-laws require only a small quorum to transact business and may permit absent members to vote by letter or telephone on propositions submitted to them in writing.

45. ENTERTAINMENTS

As a profitable means of promoting health, a Crusade entertainment-meeting should be held each month. It may be given by a single class or club or single school, or by several jointly, so far as children and their adult supporters can be gathered into one meeting. The entertainment for all may be furnished by different schools in turn. The hour may be in or after school or in an evening following which children do not have to rise early for school.

Crusade entertainments properly conducted are not "lectures," but meetings made *interesting* to children and adults by presentation of facts with pleasing association or with appeal to wonderment, and through action, display, games, pageants, clownery, music, etc. The Bulletin of the National Association gives suggestions each month for conducting meetings as entertainments on the subjects listed below or similar subjects. Crusaders should take an active part in the program themselves, especially as actors in health playlets. Meetings made occasions to appeal to Crusaders' pride should be announced in newspapers. For means of making meetings *entertainments*, see "Playlets," "Motion Pictures," "Exhibits," "Accolade" and "Songs" below.

Adult speakers should be given ample notice to prepare talks made graphic with models, pictures and lantern slides, and couched in simple language. Most communities have a doctor, dentist, nurse or physical director who can with words and apparatus make health

facts interesting. The school nurse is a logical leader for the meeting. If a special talk has not been prepared, a story may be told. For books of stories, see § 57. Skilled women story-tellers are frequently available, both among and outside the teachers. Stories of crusaders and knights and of Arthur's Round Table, applied to the quest of health, will inspire children. Calisthenics, exercise games or folk dances may be conducted at every meeting.



EPISODE IN CRUSADE PAGEANT BY ATLANTIC CITY SCHOOL CHILDREN

46. SCHEDULE OF MEETINGS

- September—Stories of the old crusades and of the Modern Health Crusade. First aid to the injured. Posture. Presentation of certificates to pages. (The monthly weighing of Crusaders with entry of weights on Roll of Health Knighthood, if not done at another time in school, should be attended to at the meetings.)
- October—Care of teeth. Toothbrush drill. Care of nose and throat. Presentation of squires' certificates. Organization of club.
- November—Care of eyes, skin and scalp. Baths. Presentation of badges.
- December—Tuberculosis and respiratory diseases. How to prevent colds. Christmas health seals. Presentation of badges. Accolade of knights and knights banneret.
- January—Home and school gymnastics. Folk dances. Organized play in winter.
- February—Fake cures and real medicine. Fresh air, wholesome food, exercise, rest. Methods of outdoor sleeping. Conferring of advanced order titles at meeting in any month in which the most pupils have qualified).
- March—Fly, mosquito—and vermin campaigns. Clean-up work.
- April—Nervous system. Influence of mind on health. Cheerfulness, anger, courage, purity.
- May—What and how to eat and drink. Regularity. Weight. Food protection. Clean hands. Typhoid fever.
- June—Temperature. Alcohol, tobacco, injurious soft drinks.
- July—Patriotism of health. Marching or military drills. Care of feet.
- August—Outing or picnic. Field athletics and organized play.

The eleven chores may well be made the subjects for a schedule for five meetings, under the following grouping: (1) chores 1, 2 and 11; (2) chores 8 and 9; (3) chores 3 and 4; (4) chores 6 and 7; (5) chores 5 and 10. The hygienic reasons for the chores and methods of performance should be taught in an entertaining way. Presentations of badges, the accolade, playlets, etc., should be conducted with these meetings.

47. PLAYLETS

Many interesting health playlets and pageants suitable for children are available. "King Good Health Wins," "Mr. I. N. Different is Double Crossed," "A Pageant in the Interest of Good Health" and other simple, easily rehearsed dramas written for the Crusade will provide entertainment of intense interest for parents and friends of children. A performance combined with the accolade is especially effective and justifies admission charges. The National Association will supply particulars, with prices, for various productions. Fifteen other health playlets, designed primarily for children and published by the National Association, are sold for 1c. each. "The Play's the Thing," a circular summarizing their stories and telling how to use them, will be mailed free on request.



PLAYLET "KING GOOD HEALTH WINS"

48. MARIONETTE THEATERS

Health lessons may be given tellingly and humorously to audiences of all ages through the use of the Dondo-Jenter miniature theaters with puppet actors. Teachers or pupils seated beneath the stage, behind the curtained front of the theater, speak the lines and manipulate the puppets. The Dondo-Jenter marionettes are operated by means of wires in place of the usual strings, which greatly simplifies operating them. Audiences as large as 300 persons may be entertained. Three people can readily operate five puppets. The complete theater with five marionettes and three copies of the Crusade playlet, "Sally, Health Crusader," is sold through the National Association for \$200, or the outfit may be rented at \$5.00 per day, transportation extra. Schools may present original plays.

49. TINY TIM'S HOUSE

A smaller theater, made of cardboard, decorated in brilliant colors and easily shipped by parcel post, can be purchased from the National Association for only \$2.00, delivered. Tiny Tim's House is made in two parts, proscenium and backdrop. The complete outfit consists of directions for costuming the actors and setting up the theater, and two copies of the food playlet, "The Champions." Additional drops may be purchased for 75c. extra. The actors for this theater are potatoes and other vegetables, whose odd shapes have unusual possibilities for character expression and whose presence conveys lessons in nutrition.

50. CLOWNS

Clowns trained for health work are very valuable for arousing children's interest in health practices. Their performance gives a forceful send-off for Crusade work, while the

progression in health knighthood during subsequent weeks of chore performance gives the continued interest essential in habit formation. The National Tuberculosis Association and the Child Health Organization have clowns in their employ, available for schools.



MARIONETTES

51. MOTION PICTURES

When a motion-picture machine can be procured, the display of one of the health films will contribute greatly to the success of a meeting. The National Association will give inquirers information about films. Several films may be rented at 75c. per day each or purchased for \$75 and \$100. Among them, "The Modern Health Crusade" and "Jinks," 1,000-foot reels, will instruct, interest and amuse. They have been bought by many state associations and are loaned free (except postage) upon request to the state office.

52. EXHIBITS

A special Modern Health Crusade exhibit, price \$9.00, delivered, may be purchased of the National Child Welfare Association, 70 Fifth Avenue, New York. It consists of twelve panels, about 17 by 28 inches, for wall display, lithographed and colored by hand, the illustrations and text being original and effective. This exhibit is also printed as an edition for negro children and sold for \$9.00. Other series of panels bearing on child birth are published by the National Child Welfare Association, under the titles, "Healthy Children" (First and Second Series), "Prevention of Tuberculosis in Childhood," "Hygiene for School Children," "The A-1 American Girl," "The A-1 American Boy," and "The American Citizen." Teachers will find it helpful to secure (free) the National Welfare Association Bulletin 33, "Teaching Health Through the Use of Graphic Material." The "Child Welfare



KNIGHTING CRUSADERS, 24TH STREET SCHOOL, DENVER

Handbook," a beautiful 38-page brochure, giving miniature prints of many exhibits, may be obtained for 50c. It has chapters on "What Every Community Should Know About Its Children" and "How to Arouse Community Interest in Child Welfare."

A comprehensive exhibit on school hygiene is furnished by the Committee on Health Problems of the National Council of Education, 525 West 120th Street, New York. Fifty-eight instructive charts may be had for \$7.00.

53. ACCOLADE

While a ceremony in creating knights is not necessary in Crusade work, wherever it is possible children who have qualified should be given a formal investiture of title. The following accolade is a piece of pageantry readily made impressive to participants and spectators alike.

For the accolade the candidates are assembled in one room or in an open space out of doors. If they represent more than one class they should be grouped by classes. The schoolmates of the candidates should be assembled to witness the ceremony, but should be kept in a separate group.

The ceremony is conducted by the principal (grand master) and teachers (Crusade masters). If the number of candidates is small, the sword blows should be given to each one. But one, two or three children from each class may be chosen to represent all the candidates. In a Crusade club they should be the captain, lieutenant and herald, provided these officers have earned knighthood. If a sword is lacking, a national flag, furled on its staff, may be used for the blows.

If there is but one class or ungraded school, the teacher, in the absence of the principal, may take his part, while chosen pupils give the responses for the Crusade master.

Order of Ceremony

I. Singing of a Modern Health Crusade song.

II. The grand master occupies the center of the stage, carrying a sword. Between the grand master and the candidate stand the Crusade masters, each facing partly toward the grand master and partly toward her group.

GRAND MASTER: Hail! Whom bring you here?

FIRST CRUSADE MASTER: True and loyal workers, sir; candidates for knighthood.

GRAND MASTER: And you, my sister, who are these who follow you with such good will?

SECOND CRUSADE MASTER: True and loyal workers, sir; candidates for knighthood.

(The grand master makes similar inquiries of any other Crusade masters, who reply in turn.)

GRAND MASTER (addressing the candidates): What is the quest which you will seek if created knights?

CRUSADE MASTER OR CANDIDATES (in unison): Our quest is happiness, both for others and ourselves.

GRAND MASTER: In truth you are ambitious. Have you brought silver and gold to exchange for your precious boon?

FIRST CRUSADE MASTER: Nay, nay, sir. Silver and gold have we not. We know that happiness is not purchased with silver and gold.

GRAND MASTER: You have well said. What, then, have you with which you hope to obtain happiness?

FIRST CRUSADE MASTER: Three things we bring: clean bodies, clean minds and kind hearts.

GRAND MASTER (to other Crusade masters): And you?

OTHER CRUSADE MASTERS OR CANDIDATES (in unison): We bring the same sir: clean bodies, clean minds and kind hearts.

GRAND MASTER: Now indeed I do perceive that you bring offerings more worthy than silver, gold or precious stones. A kind heart cannot live in the same body with a foul mind, nor can kind hearts and clean minds comfortably dwell in any but clean bodies. Squires, you are already on the way to happiness. Follow the straight and narrow path of Modern Health Crusaders. Be on your guard against that demon of unhappiness—disease. If you observe the Crusaders' rules of health you will rob this demon of many of his terrors.

Tell me now, my sisters, are you satisfied that these candidates have each faithfully performed their health chores and kept their records for the time required for knighthood?

CRUSADE MASTERS (in turn): We are.

GRAND MASTER: Give heed, my true and loyal workers, and receive the investiture of the order.

(The representatives of each group in turn come forward on signal by the grand master and kneel on one knee or stand with bowed head before him. The grand master then lightly taps each representative with the flat of his sword once on the right shoulder.)

GRAND MASTER: Squire of the Modern Health Crusade, by the authority of the (name of state) Legion of Modern Health Crusaders, I do now create each one of you a Knight Crusader and invest you with the honors of the order. May you grow in the knowledge of health and be always found fighting our common enemy, Disease.

(The Crusade masters now come forward one at a time and receive from the grand master the knights' badges. The representatives return with them to their groups.)

III. When the degree has been conferred upon the last group, all again sing a modern Health Crusade song. The Crusade masters afterward distribute the badges.

Knights Banneret

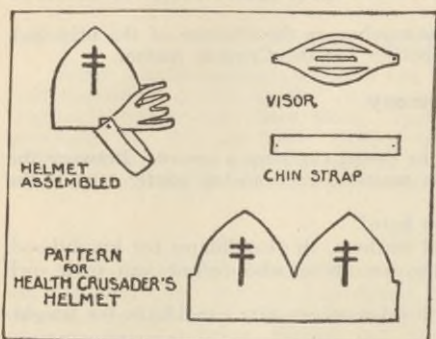
The ceremony for knights banneret is the same as for knights, with the following changes. The grand master addresses the candidates as "sir knights" instead of "squires." The sword blows are two, one on each shoulder.

To add to the occasion, a Modern Health Crusade flag may be unfurled after the title has been conferred on the knights banneret. The grand master summons them to come forward, saying, "Arise, chevaliers of health, to receive your standard."

54. COSTUMES

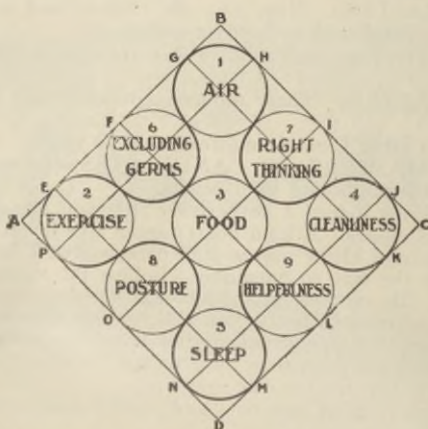
The knighting ceremony will be heightened by the use of white capes and paper helmets. They are serviceable in "King Good Health Wins" and other playlets. The capes are circular-shaped, of muslin, painted with health crosses. Scarlet bloomers and white hose go well with the capes.

The pattern for a Crusader's helmet, to be used on all occasions when the health drive is featured, is very simple and can easily be made in a seat-work period. The material is stiff paper, preferably gray, put together with McGill fasteners. No paste is needed. The following dimensions make a helmet of correct size for the average intermediate grade child: helmet, 22 by 11 inches; visor, 16 by 5½; chin strap, 16½ by 2½. After the helmet is cut and put together, insignia may be painted on in red.



55. SONGS

A number of songs inspired by the Modern Health Crusade are in use. The Crusaders' Song, printed herewith, is sung to music composed for it by Claude Warford and also to Denza's "Funiculi, Funicula." The National Association will supply prints of the tune and words and of the words of songs set to popular music, at cost price.



(Diagram for drawing Crusaders' cross, showing the health-giving principles for which the nine circles stand.)

CRUSADERS' SONG

By EMILY NICHOLS HATCH

Hail! all ye gentle knights and squires and pages!

Crusaders' band, for health we stand.
While all around life's battle fiercely rages,
We'll do our part—clean hands and heart.
Our soldiers bravely there in France were fighting
Like knights of old, chivalrous, bold.
Like them we must some wrong each day
be righting
With smiles of cheer, and know no fear.

Chorus:

We'll battle, we'll conquer; disease and dirt
we'll slay!
We'll scout them and rout them and drive
them off each day!
With hands and bodies clean and hearts all
brave and bold,
Prepared our country's flag and honor to
uphold.

With souls and bodies growing strong and
stronger,
Brave knights we'll be, our land to free
From curse of dread disease which shall no
longer
O'er it prevail. We shall not fail.
The holy war which we must still be waging
Is for good health. 'Tis more than wealth.
The health of mind and body is engaging
Our efforts true, in all we do.

HAPPY YOUNG CRUSADERS.

(Tune: "Onward, Christian Soldiers.")

Happy young Crusaders,
In the quest of health,
For we know that bodies strong,
Profit more than wealth.
We are all united
'Gainst a common foe:
From our homes and schoolrooms
All disease must go.

Chorus:

Modern Health Crusaders,
Battling for the right;
We are fresh-air soldiers,
Morning, noon and night.

Loyal young Crusaders,
Forward we will go,
'Neath the good health banner
Vict'ry we shall know.
Open wide the windows,
Let the fresh air in;
It will make us stronger
And will help us win.

CHORE SONG

By ESTHER WATSON

(Tune: "Yankee Doodle")

I washed my hands before each meal,
To have them clean and nice,
(Wash hands.)
I washed my face and neck and ears,
(Scrub face, neck and ears.)
My finger-nails cleaned twice.
(Clean finger-nails.)

Chorus:

So I am a Health Crusader,
(Salute.)
I'm growing fast all day long, sir—
(Bend both arms up, expanding chest.)
For I'm going to help my Uncle Sam
(Point to flag.)
To make my country strong, sir.
(Salute.)

I put no unclean things in my mouth,
Pencils, books nor fingers—
(Lift pencil toward mouth, then put
down quickly.)
I wash my teeth at early morn
And while the evening lingers.
(Brush teeth.)

I took ten slow, deep breaths of air
(Expand chest.)
I covered any sneezes—
(Cover mouth with handkerchief.)
I played outdoors a whole half hour,
Amid the pleasant breezes.
(Toss imaginary ball into the air.)

I was in bed ten hours last night,
(Close eyes with head on left arm.)
With windows open wide,
(Open imaginary window.)
Drank four glasses of water to-day,
(Drink from imaginary tumbler.)
No tea nor coffee beside.
(Put out right hand in refusal.)

I ate fruits, cereals—not much meat—
I chewed them slowly and long,
(Slow chewing motion.)
Had milk and eggs and such good things,
As make all children strong.
(Show biceps of right arm.)

I try to sit and stand up straight,
(Stand very straight.)
Be helpful, neat and kind,
I take a full bath twice a week,
(Splash with imaginary water and rub
down with imaginary towel.)
And keep a cheerful mind.
(Smile.)

DRILL SONG FOR YOUNGER GRADES.

(Tune: "Round and Round the Mulberry Bush.")

This is the way we clean our teeth,
Clean our teeth, clean our teeth,
This is the way we clean our teeth,
Every night and morning.

Take your brush, go up and down,
Up and down, up and down,
Take your brush, go up and down,
Every night and morning.

Don't forget both back and front,
Back and front, back and front,
Don't forget both back and front,
Every night and morning.

If you brush them faithfully,
Faithfully, faithfully,
You a knight will surely be,
Every night and morning.

This is the way we catch our cough
(sneeze),
Catch our cough, catch our cough
(sneeze),
This is the way we catch our cough
(sneeze),
So early in the morning.

56. CONSTITUTION AND BY-LAWS

The following constitution and by-laws are standard for a Health Club:

Constitution

ARTICLE I—NAME

The name of this club of Modern Health Crusaders shall be

ARTICLE II—OBJECTS

The objects of the club shall be the formation of good health habits by the members; the spread of knowledge concerning the prevention of disease; participation in athletics; cooperation with teachers, principal, school nurse and janitor in the interest of health; and the improvement of sanitary conditions in school, homes, yards and streets. It shall be the aim of each member to stand for clean thought, clean speech, clean sports, and for loyalty to the club, school and community.

ARTICLE III—GOVERNMENT

The general plans and program of the club shall be determined by its members and under the advice of the Crusade master. The Crusade master is the teacher or adult appointed. The execution of the program shall be under the direction of the Executive Committee, with whom shall rest the executive management of the club. Should there be more than one club in this city (town), the executive committees of all clubs shall be a central committee of directors with power to coordinate the activities of the several clubs. The members of this central committee shall elect a chairman from their number.

The constitution and by-laws may be amended at any meeting of the club upon two-thirds vote, provided that notice of such proposed amendment shall have been given to each member at least ten days before the meeting.

By-Laws

NUMBER 1—MEMBERSHIP

The members of the club shall be pupils of this school (class) who have met the requirements for enrollment as Modern Health Crusaders. Membership in this club is for the term covered by the member's certificate of enrollment as a Modern Health Crusader.

All Modern Health Crusaders, members of this club, shall have equal votes in meetings of the club, regardless of their rank. The quorum required for transaction of business at a meeting of the club is five members. The total membership must be at least seven.

The club may elect such adult honorary members as it chooses, for services or on payment of dues of not less than \$..... Honorary members may participate in the discussions of the club, but shall have no vote.

NUMBER 2—OFFICERS

The officers of the club elected from the members shall be Captain (president), Lieutenant (vice-president) and Herald (secretary). To retain office each of these officers must do 75 per cent. of the health chores per week during at least three-fourths of the weeks of his term.

The term of office for Captain, Lieutenant and Herald shall be three months (or a school term).

Health inspectors and similar officers may be appointed by the Crusade master or elected from the members for specified periods of time.

NUMBER 3—EXECUTIVE COMMITTEE

The elected officers of the club and the Crusade master shall be the Executive Committee.

NUMBER 4—MEETINGS

The club shall hold meetings monthly between the first and tenth days. Additional meetings may be held. Members failing to attend at least meetings within each four months of their membership shall be subject to expulsion and forfeiture of titles and badges.

The election of officers shall occur at meetings at intervals of three months. In event of a vacancy the Executive Committee may call a special meeting to elect a successor for the unfilled term of office.

PROCEDURE FOR MEETINGS

The following form of parliamentary procedure may be used: call to order; roll call; signing of constitution by new members; reading minutes of last meeting; reports of committees; new business; adjournment. Crusaders should be called on to vote frequently and take an active part. Reports of committees should be acted on in a businesslike way.

57. LIST OF BOOKS

Large expenditure for these publications need not be made. Except for textbooks for class use, they are for the most part needed only by the teacher. Where a small supply can be secured, they may be used effectively as a loan to groups of pupils as a special honor. Orders should be sent to the publishers.

Stories

- "Keep Well Stories" (Lippincott), 85c. Journal of the Outdoor Life, 370 Seventh Ave., New York.
"Child's Book of Health," Blaisdell, 60c. Ginn & Co.
"Cho Cho and the Health Fairy," 10c. Child Health Organization, 370 Seventh Ave., New York.
"A Gentle, Perfect Knight." World Book Co., Yonkers, N. Y.
"Page, Esquire and Knight," 64c. Ginn & Co.
"When Knights Were Bold," \$2.50. Houghton Mifflin.
"A Knight Without Reproach," Ellis Parker Butler, 3c. National Association.
"Old Folk Games and Dances," 10c. Bureau of Education, Dept. of Interior.

Plays and Songs

See § 47 and § 55.

Physical Exercises

- "Play and Recreation for the Open Country," \$1.45. Curtis.*
"Rhythmic Action, Plays and Dances," Moses, \$2.50. Thomas Charles Co., Chicago.
"Physical Training for the City Schools of Michigan," 30c. State Department for Education, Lansing, Mich.
"Games for Playground, Home, School and Gymnasium" (440 games), Bancroft. \$2.40. Macmillan.
"Physical Training for Elementary Schools" (music, play), \$2.00. Clarke.*

Health Primers

- "A Child's Book of the Teeth," Ferguson, 52c. World Book Co., Yonkers, N. Y.
"Teeth, Tonsils and Adenoids," Metropolitan Life Insurance Co.
"Child Health Alphabet," Metropolitan Life Insurance Co.
"Health First Reader," 10c. Strobridge Lithographing Co., Cincinnati.
"Silent Reading for Health," 5c. Iowa Tuberculosis Association, Des Moines.
"Health Essentials for Rural School Children," Wood, 10c. National Council of Education, 525 W. 120th St., New York.

Textbooks on Hygiene, Physiology and Sanitation

See § 23 and § 70.

*Purchase through American Physical Education Association, Springfield, Mass. Secure their bibliography of 500 books.

IV. ADVANCED PROGRAM

58. THE ROUND TABLE OF THE MODERN HEALTH CRUSADE

The highest distinction that may be won by a Modern Health Crusader is membership in the National Order of the Round Table. As in the days of King Arthur, a seat at the Table Round is a sign of superiority, an honor achieved by only the best and most valiant knights. But in true democracy all who prove their prowess find seats, for the Round Table of Health Chivalry, like that chronicled by Layamon, has the gift of expansion, and the modern Order knows no "nobility" except the nobility of health, physical and moral.

Through the recreation of the Round Table, a subject that has captured the interest of poets and romancers and children innumerable for centuries past, the Modern Health Crusade extends its unique interest for children from the practice of the health chores to

the study of hygiene and the acquisition of physical and athletic fitness in various ways. The new Round Table gives the pupil a motive to work in these lines, thus lightening the task of the teacher. It entails no organization obligations: the examinations for a right to a seat are already employed in physical education work in hundreds of schools.

A certificate of membership in the Order is awarded by the National Tuberculosis Association. It is issued to each qualifying Crusader by the association for his or her state. Corresponding to the forty-eight states, the District of Columbia and the other national territorial divisions, the Round Table is divided into Sectors, the relative size of each sector depending on the number of members who qualify from that territory. Every Knight of the Round Table is likewise entitled to wear the beautiful badge of the Order. Under manufacturing arrangements made by the National Tuberculosis Association, the badge may be purchased at very low cost (30c.) by the knight or by the local organization promoting Crusade work. An accolade for the investiture is given in § 69.

The membership of each Knight of the Round Table is for approximately three years, terminating December 31st in the third school year following the school year in which he or she was admitted. Members who qualify a second time after the three years of their first membership and have earned the Crusaders' rank of knight banneret yearly five or more times become Knights Constant of the Round Table, the supreme title of health chivalry.



59. QUALIFICATIONS FOR SEATS

Admission to the Order of the Round Table is limited to Modern Health Crusaders with rank as high as Knight Banneret. Each such Crusader may obtain a seat at the Round Table by earning 100 points or credits out of a possible 225, through meeting the following qualifications. The candidate who earns 100 points through some of the qualifications need not meet the others, but will be greatly benefited by striving for points under all seven qualifications.

1. Obtaining a school mark of 85% or more in a course in hygiene of the standard described below. 20 to 30 points.
2. Passing the athletic tests described. 20 to 30 points.
3. Having a weight approximating or reaching the normal for height and age. 10 to 30 points.
4. Passing the tests described for correct posture. 20 to 30 points.
5. Passing physical examinations as described. 5 to 45 points.
6. Passing the examination required for the Certificate of First Aid issued by the American Red Cross. 30 points.
7. Scouting and Camp Fire Girls. For becoming a Boy Scout or Girl Scout Tenderfoot, 10 points; Second-Class Scout, 20 points; First-Class Scout, 30 points. For becoming a Camp Fire Wood Gatherer, 15 points; Fire Maker, 30 points.

Adults who become Knights Banneret may obtain seats by earning points as enumerated.

60. TESTS

The tests of qualification for the Round Table may be conducted during the weeks of chores required for Crusade rank; the candidate need not become knight banneret first. All tests and examinations required under the seven qualifications must be conducted during the school or calendar year for which the candidate is enrolled as a Modern Health Crusader. Tests should be made as early as possible in the school year so that in case of failure the pupil may have as long as possible after learning his defects to remove them and make a second trial.

The smallest number of points specified above for each test is the minimum number that may be credited. No points are credited for partial success in tests insufficient for the minimum number of points.

In schools with a physician, nurse or physical training teacher, some or all of the tests should be made by them. In their absence, the tests for enough qualifications for the Round Table may be conducted by the teacher alone, in a school with a hygiene course.

61. REPORTS

When a candidate is entitled to a seat and certificate, a report on the points earned, including dates of the tests, is to be sent by his teacher or principal to the association for his state listed on the back page of this manual. The report should be sent to that association as soon as the candidate has earned the required points, so that he may be promptly admitted to the Round Table without waiting until other candidates may qualify. To be

accepted, the report *must* be received by the state association and transmitted to the national association not later than February 15th following the calendar year for which the candidate is enrolled. The report blank is published by the National Tuberculosis Association.

EXPLANATION OF QUALIFICATIONS AS NUMBERED

62. (1.) HYGIENE COURSE

The course in hygiene must require at least 20 minutes of class instruction per week for 30 weeks in one school year, or proportionately more minutes for a less number of weeks. The course must be based on up-to-date textbooks in hygiene or in hygiene and physiology in combination, with the emphasis placed on hygienic practice and habit and not on physiological description. The number of points earned by a candidate for the Round Table is determined by his marks, thus:

For a mark of 95 or more (basis 100)	30
For a mark of 90 but not 95	25
For a mark of 85 but not 90	20
For a mark of less than 85	0

63. (2.) ATHLETIC TESTS

These tests are the Athletic Badge Tests standardized by the Playground and Recreation Association of America (1 Madison Ave., New York City).



For Boys.

First test:	Pull up (chinning).....	4 times	20 points
	Standing broad jump.....	5 ft. 9 in.	
	60-yard dash.....	8-3/5 seconds	
Second test:	Pull up (chinning).....	6 times	25 points
	Standing broad jump.....	6 ft. 6 in.	
	60-yard dash.....	8 seconds	
	Or 100-yard dash.....	14 seconds	
Third test:	Pull up (chinning).....	9 times	30 points
	Running high jump.....	4 ft. 4 in.	
	220-yard run.....	28 seconds	



For Girls.

First test:	All-up Indian club race.....	30 seconds	20 points
	Or potato race.....	42 seconds	
	Basket-ball goal throwing.....	2 goals, 6 trials	
	Balancing.....	24 ft., 2 trials	
Second test:	All-up Indian club race.....	28 seconds	25 points
	Or potato race.....	39 seconds	
	Basket-ball goal throwing.....	3 goals, 6 trials	
	Balancing (bean bag or book on head).....	24 ft., 2 trials	
Third test:	Running and catching.....	20 seconds	30 points
	Throwing for distance, basket-ball.....	42 ft.	
	Or volley-ball.....	44 ft.	
	Volley-ball serving.....	3 in 5 trials	

There are no weight nor age limits in these tests. They are suitable for normal children from 11 years upward. It is necessary to qualify at one time in all three events in any one test in order to win the points for the Round Table or the badges of the Playground and Recreation Association. The points won in only one of the three tests can be counted for the Round Table: 30 is the maximum number. For rules and instructions secure the booklets, "Athletic Badge Test," for boys and for girls, respectively, sent postpaid for 5 cents each by the playground Association or the National Tuberculosis Association. Up to 12 copies will be sent free to a school. The badges, in bronze, make beautiful prizes. They are made in three classes, corresponding to the three tests, as illustrated on this page.

64. (3.) CORRECT WEIGHT

One of the qualifications desired in a candidate for the Round Table is a weight that indicates physical fitness. Malnutrition, exceedingly common among school children, constitutes a serious menace to health. Excessive overweight is likewise conducive to disease. The following tables, A and B, prepared by Dr. Thomas D. Wood, give the normal weights for height and age in school children. Children weighing as much as 10 per cent. below normal, and in many instances 7 per cent., may be classed as malnourished. Table C gives the normal weights for older persons, as determined by the experience of a great life insurance company.

Both age and height should be considered in determining whether a person's weight is correct. For growing children, height measured at six-month intervals, preferably in September and March, should be considered. Height should be measured with the subject standing with feet together and close against the measuring rod. For lack of a rod, a tape measure may be tacked on a wall. A book placed edgewise on the head and straight against the tape serves to indicate the height.

In determining points for the Round Table, normal weight or a weight *less* than 1/12 below or 1/8 above normal is credited with 30 points, except during the first two months of the school year. Weights showing greater variation from normal are credited in accordance with Table D below. The teacher or assistant weighing the pupil records his weight and the difference, if any, between it and normal weight, and by division determines the fraction that this difference is of the normal. The fraction determines in what class in Table D the pupil belongs and the number of points to his credit.

Here is an example. Jane Smith weighs 53 pounds in April and is 52 inches tall. On her last birthday in September she was nine years old. April is seven months after September and five months before September. Hence her age next September, her nearest birthday, is considered ten years. Looking down the column for ten years until the figure in line with the height, 52 inches, in the first column is reached, her normal weight is found to be 65. Finding the difference between 65 and 53, we have 12 pounds underweight. By dividing 12 into 65 we find that 12 is less than 1/4 but more than 1/6 of 65. This means that Jane comes in Class C in Table D and can be credited with only 10 points.

Table A
Height and Weight Table for Boys.

Height Inches	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs
39	35	36	37											
40	37	38	39											
41	39	40	41											
42	41	42	43	44										
43	43	44	45	46										
44	45	46	46	47										
45	47	47	48	48	49									
46	48	49	50	50	51									
47	51	52	52	53	54									
48	53	54	55	55	56	57								
49	55	56	57	58	58	59								
50	58	59	60	60	61	62								
51	60	61	62	63	64	65								
52	62	63	64	65	67	68								
53	66	67	68	69	70	71								
54	69	70	71	72	73	74								
55	73	74	75	76	77	78								
56	77	78	79	80	81	82								
57	81	82	83	84	85	86								
58	84	85	86	87	88	90	91							
59	87	88	89	90	92	94	96							
60	91	92	93	94	97	99	101	102						
61	95	97	99	102	104	106	108	110						
62	100	102	104	106	109	111	113	116						
63	105	107	109	111	114	115	117	119	120	122				
64	113	115	117	118	119	120	122	124	125	126				
65	120	122	123	124	125	126	127	128	129	130				
66	125	126	127	128	129	130	131	132	133	134				
67	130	131	132	133	134	135	136	137	138	139				
68	134	135	136	137	138	139	140	141	142	143				
69	138	139	140	141	142	143	144	145	146	147				
70	142	143	144	145	146	147	148	149	150	151				
71	147	149	150	151	152	153	154	155	156	157				
72	152	154	155	156	157	158	159	160	161	162				
73	157	159	160	161	162	163	164	165	166	167				
74	162	164	165	166	167	168	169	170	171	172				
75	167	169	170	171	172	173	174	175	176	177				
76	174	175	176	177	178	179	180	181	182	183				

Table B
Height and Weight Table for Girls.

Height Inches.	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs
39	34	35	36											
40	36	37	38											
41	38	39	40											
42	40	41	42	43										
43	42	42	43	44										
44	44	45	45	46										
45	46	47	47	48	49									
46	48	48	49	50	51									
47	49	50	51	52	53									
48	51	52	53	54	55	56								
49	53	54	55	56	57	58								
50	55	56	57	58	59	60	61							
51	59	60	61	62	63	64								
52	62	63	64	65	66	67								
53	66	67	68	68	69	70								
54	68	69	70	71	72	73								
55	72	73	74	75	76	77								
56	76	77	78	79	80	81								
57	81	82	83	84	85	86								
58	85	86	87	88	89	90	91							
59	89	90	91	93	94	95	96	98						
60	94	95	97	99	100	102	104	106						
61	99	101	102	104	106	108	109	111						
62	104	106	107	109	111	113	114	115						
63	109	111	112	113	115	117	118	119						
64	115	117	118	119	120	121	122	122						
65	117	119	120	122	123	124	125	125						
66	119	121	122	124	126	127	128	129						
67	124	126	127	128	129	130	131	133						
68	126	128	130	132	133	134	135	136						
69	129	131	133	135	136	137	138	139						
70	134	136	138	139	140	141	142	143						
71	138	140	142	143	144	145	147	148						
72	145	147	148	149										

Table C
Weights according to Age Periods.

Height Feet. In.	MEN.								WOMEN					
	19	20-24	25-29	30-34	35-39	40-44	19	20-24	25-29	30-34	35-39	40-44		
4 11	111	117	122	125	127	130	110	113	116	119	122	126		
5 0	113	119	124	127	129	132	112	115	118	121	124	125		
5 1	115	121	126	129	131	134	114	117	120	123	126	130		
5 2	118	124	128	131	133	136	117	120	122	125	129	133		
5 3	121	127	131	134	136	139	120	123	125	128	132	136		
5 4	124	131	134	137	140	142	123	126	129	132	136	139		
5 5	128	135	138	141	144	146	126	129	132	136	140	143		
5 6	132	139	142	145	148	150	130	133	136	140	144	147		
5 7	136	142	146	149	152	154	134	137	140	144	148	151		
5 8	140	146	150	154	157	159	138	141	144	148	152	155		
5 9	144	150	154	158	162	164	141	145	148	152	156	159		
5 10	148	154	158	163	167	169	145	149	152	155	159	162		
5 11	153	158	163	168	172	175	150	153	155	158	162	166		
6 0	158	163	169	174	178	181	155	157	159	162	165	169		
6 1	163	168	175	180	184	187								
6 2	168	173	181	186	191	194								
6 3	173	178	187	192	197	201								

Table D

Class.	Amount below normal weight.	Points.	Class.	Amount above normal weight.	Points.
A	Less than 1/12 (8 1/3%)	30	E	Less than 1/8 (12 1/2%)	30
B	1/12 but less than 1/6 (16 2/3%)	20	F	1/8 but less than 1/5 (20%)	20
C	1/6 but less than 1/4	10	G	1/5 but less than 1/4	10
D	1/4 or more	0	H	1/4 or more	0

The best weight (i. e., nearest to normal) shown at any weighing during the school year through which the Crusader is enrolled, except during the first two months, may be considered for the Round Table. The practice of weighing should begin the first of the school year so that the child and his parents, informed of a departure from normal weight, may have as much time as possible during the period for which the child is enrolled as a

Crusader to acquire correct weight through proper diet and fidelity to the health chores. It is recommended that school children be weighed monthly, on the same day of each month. Weight and height should be taken in house clothes, without shoes. The age at the nearest birthday should be considered. The national slogan, "A scale in every school," should be made effective. Where weighing must be done out of school the teacher may secure the assistance of the most responsible pupils in weighing the others on a merchant's scales.

Inasmuch as some underweight children are so circumstanced or constituted that they cannot reach normal weight within a school year, the following supplementary method of earning credits for the Order of the Round Table has been adopted. The underweight boy or girl who makes an average monthly gain equal to the amount shown for his age in Table E below for a period of six consecutive months, in each of which he is weighed, may be credited with 25 points, although his best weight may give him many less points under Table D. The pupil may be given credits under either of the two methods, according to Table D or Table E, but not under both methods.

Table E—Prepared by Dr. L. Emmett Holt

Boys.		GIRLS.	
Age.	Gain.	Age.	Gain.
5 to 8 years.....	6 ounces	5 to 8 years.....	6 ounces
8 to 12 years.....	8 ounces	8 to 11 years.....	8 ounces
13 to 16 years.....	16 ounces	11 to 14 years.....	12 ounces
16 to 18 years.....	8 ounces	14 to 16 years.....	8 ounces
		16 to 18 years.....	4 ounces

The monthly weights of the pupils may be conveniently recorded on the Roll of Health Knighthood and the report form for the Round Table. (See "Prices," § 19.)

A series of publications on health, with emphasis on nutrition work in schools, has been prepared by the Child Health Organization and may be secured at nominal cost from the Superintendent of Documents at Washington, D. C. The list will be sent to applicants by the Bureau of Education. Single copies of the publications will be sent free.

The Child Health Organization, 370 Seventh Ave., New York, has the following for sale:

- "Cho-Cho and the Health Fairy," 15c. each, \$12.00 per 100.
- "Child Health Alphabet," 10c. each, \$8.00 per 100.
- "Rosy Checks and Strong Heart" (Andress), 30c. each, \$27.00 per 100.
- "Rhymes of Cho-Cho's Grandma," 20c. each, \$19.00 per 100.
- "Standards of Nutrition and Growth" (Holt), \$11.00 per 100.



INCORRECT POSTURE



CORRECT POSTURE



EXAGGERATED POSTURE

The child's weight as an index of his health should be reported to his parents periodically. The blanks on each Crusade chore record serve the teacher for making such reports.

The seriously malnourished child should not take as much exercise as the normal. Athletics should not be attempted until weight is built up. Lunches of milk or other plain nourishing food should be given, both mid-morning and mid-afternoon. They should be followed by rest flat on the back for 45 to 60 minutes in the morning and 25 minutes in the afternoon. Instructions will be furnished to teachers applying to the Elizabeth McCormick Memorial Fund 848 N. Dearborn St., Chicago.

65. (4.) CORRECT POSTURE

The tests required for the fourth qualification are those standardized by the American Posture League and required for the award of its badges. Posture is judged according to a vertical line test, as illustrated on the League's wall charts, which posture is to be held during the triple test for endurance in posture.

The triple test consists of judging the posture in (1) standing, (2) marching for at least three minutes, (3) corrective exercises, including stretching the arms forward and upward. A candidate must hold good posture throughout all three parts of this test taken in rapid succession, to be considered as passing the triple test.

A candidate who passes the triple test once a month for three consecutive months earns 20 points for admission to the Round Table and is eligible for the gilt pin of the American Posture League. A candidate who (1) passes the triple test once a month for five consecutive months and has a rating of "A" for habitual good posture, or (2) having previously earned the 20 points, passes the triple test for four additional consecutive months and has a rating of "A" for habitual good posture earns 30 points and is eligible for the silver pin.

The A. P. L. pins make badges for the holder to be proud of. To secure the pins a list of the candidates who have passed the test must be sent to the American Posture League, 1 Madison Ave., New York, with the following certification, accompanied by remittance. Gilt pins are 20 cents and silver pins 25 cents each.

"The above-named candidates have successfully passed the test prescribed for the gilt/silver Good Posture Pin of the American Posture League. I hereby apply for pins for them and will be responsible for these pins being given only to the individuals named herein."

(Signed) Instructor

..... Principal

Date.....

It is legitimate to ask the pupils winning to pay for these posture pins or the athletic test badges, if funds are lacking to donate them.

The wall charts of the American Posture League are desirable for every schoolroom. They are published with pictures either of a boy, like the illustration on this page, or of a girl. They may be purchased of the American Posture League at the prices in § 19. Apply to the League for particulars on their sitting posture charts and other publications.

66. (5.) PHYSICAL EXAMINATION

Points are credited to the candidate for traits of physical fitness, disclosed by examination, as enumerated below. Regardless of the Round Table, every pupil should be thoroughly examined by a school physician once and preferably twice during the school year. A dentist also should examine him once a year and preferably every six months. If a school does not have the services of a physician, a school nurse or any trained nurse can, for the purpose of the Round Table, give the pupil the examination specified below, except as to his heart, lungs and teeth. Following the instructions in some textbooks on hygiene and physiology and by the use of the Snellen test card and directions for testing eyesight, the teacher, unassisted, can test the pupil's hearing, sight and shoeing. Unless the candidate fully earns the number of points specified for one of the following tests, in compliance with all conditions, he is credited with no points on that test.

Teeth, 10 points. If the candidate's teeth are sound, not requiring a dentist's services, he is credited 10 points. He must present a written statement from a dentist, or the dentist must report directly to the teacher, that his teeth have been examined and either that they do not need filling, extraction or operation, or that such treatment has been completely administered.

Nose and throat, 10 points. If the candidate habitually breathes through his nose with his mouth shut and his nose and throat do not need a physician's services, he is credited 10 points. The teacher must receive a written or oral report from a licensed physician or registered nurse, stating that he has examined the pupil's throat and either that there is no condition of adenoids or tonsils making operation or treatment by physician or surgeon advisable, or that such condition has been corrected. If a physician is not available, the opinion of a registered nurse who has made an examination may be accepted.

Eyes, 5 points. Every school child's eyes should be tested for nearsightedness, farsightedness and astigmatism, and examined for infectious diseases. When examination shows

that a candidate's eyes are free from disease and from defects making the wearing of glasses advisable, or that the faults in vision are corrected by glasses or other remedy prescribed by an oculist, he may be credited 5 points. If the teacher gives examination she must comply with full instructions furnished by her state board of education or health or by the National Committee on the Prevention of Blindness, 130 East 22nd St., New York. The latter organization will send instructions free to any teacher applying.

Ears, 5 points. When a competent examiner finds that a pupil's hearing in each ear is normal or within 10% of normal the candidate may be credited 5 points. The examination must be conducted by a physician or in compliance with full instructions issued by a state board of health or education. Such instructions are contained in Health Bulletin No. 2, "The Eyes and Ears of School Children," published by the New York State Department of Education, Albany.

Heart, 5 points. When a physician reports after a stethoscopic examination that a candidate's heart is in sound condition and that the candidate need exercise no more care in participating in athletics than the average pupil of his age, he is credited 5 points.

Lungs, 5 points. When a physician reports after a stethoscopic examination on the bare chest that a candidate's lungs are in perfectly sound condition, he is credited 5 points.



CORRECTLY SHAPED SHOE

Feet, 5 points. If a candidate wears shoes fully permitting correct position and shape for his feet, he may be credited 5 points. Shoes which bend the big toe toward the others or the others toward the big toe force incorrect shape. The shoe, like the foot, should have a "straight inner edge" (except for the instep curve). Only shoes with low heels permit correct position, and no shoes with heels more than one and one-half inches high can be passed in examination for the Round Table. The teacher should urge the use of much lower heels. Children candidates that come to school barefoot part of the time must wear their shoes for this examination. If the teacher observes that a pupil who passes this test subsequently purchases shoes that are incorrect in the respects indicated in this paragraph, during the period of his candidacy for the Round Table, his credit should not be allowed.

67. (6.) KNOWLEDGE OF FIRST AID

The candidate for the Round Table who presents this qualification must have pursued a course of study in the first aid under a teacher and have passed the examination entitling the pupil to the Certificate of First Aid issued for schools by the American Red Cross. When he has passed the examination he is credited 30 points. The course on which the examination is based is especially suited to high schools. The plan of the course, in entire harmony with the Modern Health Crusade, is to teach the pupil to do by doing. Schools which are not conducting such a course may readily secure the Red Cross circular, "First Aid Instruction in Schools," and the textbook for the teacher. Application should be made to the local Red Cross Chapter, the office for the Division, or directly to the American Red Cross, First Aid Division, Washington, D. C.

68. (7.) SCOUT AND CAMP FIRE ACTIVITIES

The training given by the Scout and Camp Fire organizations is included among the qualifications for Knights of the Round Table as a valuable aid to physical fitness. In communities where local groups are lacking, application for information should be addressed to Boy Scouts of America, 200 Fifth Ave., New York; Girl Scouts, 189 Lexington Ave., New York; Camp Fire Girls, 31 E. 17th St., New York.

69. ACCOLADE OF THE ROUND TABLE

(The ceremony is conducted by the principal [Crusade grand master] or other school authority, who addresses first the audience and then the candidates, who are grouped on one side of the stage.)

(To audience.) We are happily met together to witness the entrance of valiant Knights to the Order of the Round Table. These Modern Health Crusaders, all Knights Banneret, have each, my friends, been proven in ordeals set to test their fitness for this highest order.

When King Arthur formed his Round Table, he drew to it the flower of chivalry, "the goodliest company of famous knights whereof the world holds record." Lancelot, Galahad, Percival and many other peerless warriors were of this chosen band whose victories were blazoned on twelve great windows in Arthur's hall.

Full many years ago departed Arthur and his company, and his Round Table became a memory, celebrated in song and story. Now the Round Table is formed again, of knights arrayed not in heavy coats of mail, but in the golden armor of health.

(To candidates.) For the National Legion of Modern Health Crusaders and the (name of state) Legion, I now create each proudest Knight assembled here a member of the Round Table. That all may know of your deeds, I present each one of you with a parchment and a badge. These are the outward tokens. The order itself lives in the spirit and intent of every loyal Knight.

Now, just as truly as in the days of Arthur, you will find that every morning brings a noble chance whereby you prove yourself a noble Knight. Yours is the glorious privilege to champion the cause of health, and thus to redress human wrongs. So live that others, seeing your good deeds, will rally to the standard.

(Each candidate is called by name and presented with the certificate and badge of the Order. Exeunt to martial music.)

70. SANITATION CAMPAIGNS

In some states sanitation has been given a very large place in Modern Health Crusade work. In addition to the obvious need of community clean-up in the interest of health, it was realized that accomplishments so easily seen would greatly contribute to interest in the Crusade on the part of pupils, public and press. Sanitation work furnishes demonstrations especially valuable to high schools and junior high schools in connection with civics and courses bearing directly or indirectly on health. This branch of Crusade work brings the street cleaning department, health officer and other municipal authorities into touch with the Crusade and brings to light ordinances that are inadequate or unenforced. It wins the support of business men for the whole movement.

As various methods may be followed in sanitation work, and as local conditions determine the best, no procedure is prescribed in this manual. The experience of Crusaders in one county is recited to suggest a plan of campaign for other communities. The high schools of the county, one representing a city and the others rural districts, divided the territory into sanitary districts, the whole county being covered. The high school or schools located in each district elected a sanitary officer for the district, choosing a pupil qualified as worker and leader. Under this captain a lieutenant was elected by his fellow pupils for each subdistrict, and a corporal for each city block, while each pupil was drafted as a private.

Five objectives were set: that each house be screened against flies; that a covered garbage can be used; that all outdoor vaults be darkened so that flies would not enter; that manure or other fly-breeding matter be disinfected once a week and removed; and that the streets, alleys and premises be made clean and sightly.

The first work was a survey. The districts were marked on a county map posted in the office of the county superintendent of schools. Flat maps outlining all farm or town residences were made for each district. Under proper supervision each householder was visited and apprised of the community plan. Printed slips were used by the visitors for checking the conditions found, and the findings were noted by pins on the district maps.

The campaign for improving conditions was announced for two weeks after the survey. Changes effected were recorded on the second visit and "spotted" on the district map. Corresponding pin markings on the large map at the county superintendent's office recorded the progress of all the districts and stimulated competition between districts. So effective was the campaign that only eight householders in a city of 35,000 failed to comply with requirements. This work was done entirely by the high school and seventh and eighth grade pupils, who conferred as need arose with the local Crusade council composed of five adults.

In the country districts tests were made of the water from every well, the work being done at the high school laboratories. Much infection was found; and when the users of the water failed to be affected by the data shown, permission was secured to put a quart of kerosene in the nearby outdoor toilet. When the strata of the earth ran toward the water supply from the vault where the kerosene was placed, the kerosene was detected by odor and taste, and the people who boasted of their well water were suddenly forced to realize its true condition. The result was that 63 new wells were dug in that county, and a material decrease in the recorded number of typhoid cases ensued.

Campaigns against flies and mosquitoes readily enlist school children, when organized at all systematically. Competition should be brought into play. Prizes not only of material value, but newspaper commendation, are effective. A first step is to teach the children practical points about the insects, such as likely breeding places, disinfection to prevent hatching, and the making and placing of traps.

Publications giving all needed information can readily be secured. The National Association will give references in addition to those below, and invites correspondence with Crusade leagues and other groups planning sanitation work.

Free: "Transmission of Disease by Flies," Report Supplement No. 29, U. S. Public Health Service, Washington.

Pamphlets on fly campaigns, with directions for making traps. Apply to Agricultural Extension Division, International Harvester Co., Chicago.

"Water Supply, Plumbing and Sewage Disposal for Country Homes," Bulletin No. 57, Department of Agriculture, Washington.

For Sale: "Primer of Sanitation," Ritchie (\$1.00). World Book Co., Yonkers, N. Y.
"Civics and Health," Allen (\$1.50). "Boys and Girls at Garden City," Dawson (\$1.00).
"Town and City" (80c.) or "Physiology, Hygiene and Sanitation" (96c.), Jewett. Ginn & Co

STATE DIRECTORS AND DISTRIBUTORS FOR THE MODERN HEALTH CRUSADE

Alabama Tuberculosis Ass'n, 308 N. 21st St., Birmingham, Ala.
 Arizona Anti-Tuberculosis Ass'n, 300 E. Adams St., Phoenix, Ariz.
 Arkansas Public Health Ass'n, Donaghey Bldg., Little Rock, Ark.
 California Tuberculosis Ass'n, Griffith-McKenzie Bldg., Fresno, Cal.
 Colorado Tuberculosis Ass'n, Barth Bldg., Denver, Colo.
 Conn. State Tuberculosis Commission, State Capitol, Hartford, Conn.
 Delaware Anti-Tuberculosis Society, 911 Delaware Ave., Wilmington, Del.
 District of Columbia Tuberculosis Ass'n, 923 H St., N. W., Washington, D. C.
 Florida Public Health Ass'n, Dyal-Upchurch Bldg., Jacksonville, Fla.
 (Ga.) W. G. Raoul Foundation, 131 Capitol Square, Atlanta, Ga.
 (H. I.) Anti-Tuberculosis League, King and Liliha Sts., Honolulu, Hawaii.
 Idaho Anti-Tuberculosis Ass'n, National Bank Bldg., Boise, Idaho.
 Illinois Tuberculosis Ass'n, 516 E. Monroe St., Springfield, Ill.
 (Cook County) Chicago Tuberculosis Institute, 8 S. Dearborn St., Chicago, Ill.
 Indiana Tuberculosis Ass'n, 1134 Pythian Bldg., Indianapolis, Ind.
 Iowa Tuberculosis Ass'n, Century Bldg., Des Moines, Iowa.
 Kansas State Tuberculosis Ass'n, Mills Bldg., Topeka, Kansas.
 Kentucky Tuberculosis Ass'n, 532 W. Main St., Louisville, Ky.
 Louisiana Anti-Tuberculosis League, 730 Gravier St., New Orleans, La.
 Maine Public Health Ass'n, 318 Water St., Augusta, Maine.
 Maryland Tuberculosis Ass'n, 704 N. Howard St., Baltimore, Md.
 Massachusetts Tuberculosis League, Little Bldg., Boston, Mass.
 Michigan Anti-Tuberculosis Ass'n, Oakland Bldg., Lansing, Mich.
 Minnesota Public Health Ass'n, 300 Shubert Bldg., St. Paul, Minn.
 Mississippi Tuberculosis Ass'n, Merchants Bank Bldg., Jackson, Miss.
 Missouri Tuberculosis Ass'n, Pontiac Bldg., St. Louis, Mo.
 Montana Tuberculosis Ass'n, State Capitol, Helena, Mont.
 Nebraska Tuberculosis Ass'n, Brandeis Theatre Bldg., Omaha, Neb.
 Nevada Public Health Ass'n, Reno, Nev.
 New Hampshire Tuberculosis Ass'n, City Mission Bldg., Manchester, N. H.
 New Jersey Tuberculosis League, 45 Clinton St., Newark, N. J.
 New Mexico Public Health Ass'n, Wright Bldg., Albuquerque, N. M.
 (N. Y.) State Charities Aid Ass'n, 105 E. 22nd St., New York City.
 (New York City) New York Tuberculosis Ass'n, 10 E. 39th St., New York City.
 Brooklyn Bureau of Charities, 69 Schermerhorn St., Brooklyn, N. Y.
 North Carolina Tuberculosis Ass'n, Sanatorium, N. C.
 North Dakota Tuberculosis Ass'n, Bismarck, N. D.
 Ohio Public Health Ass'n, 83 S. 4th St., Columbus, Ohio.
 Oklahoma Public Health Ass'n, Oklahoman Bldg., Oklahoma City, Okla.
 Oregon Tuberculosis Ass'n, Selling Bldg., Portland, Ore.
 Pennsylvania Tuberculosis Society, 10 S. 18th St., Philadelphia, Pa.
 (Pittsburgh) Tuberculosis League, 2851 Bedford Ave., Pittsburgh, Pa.
 Philippine Islands Anti-Tuberculosis Society, Fajardo Bldg., Manila, P. I.
 (P. R.) Anti-Tuberculosis League, San Juan, P. R.
 Rhode Island Tuberculosis Ass'n, 109 Washington St., Providence, R. I.
 South Carolina Tuberculosis Ass'n, Liberty Bank Bldg., Columbia, S. C.
 South Dakota Public Health Ass'n, Huron, S. D.
 Tennessee Anti-Tuberculosis Ass'n, 506 Cedar St., Nashville, Tenn.
 Texas Public Health Ass'n, Littlefield Bldg., Austin, Texas.
 Utah Public Health Ass'n, State Capitol Bldg., Salt Lake City, Utah.
 Vermont Tuberculosis Ass'n, 233 Pearl St., Burlington, Vt.
 Virginia Tuberculosis Ass'n, Chamber of Commerce Bldg., Richmond, Va.
 Washington Tuberculosis Ass'n, Thompson Bldg., Seattle, Wash.
 West Virginia Tuberculosis Ass'n, Davidson Bldg., Charleston, W. Va.
 Wisconsin Anti-Tuberculosis Ass'n, 558 Jefferson St., Milwaukee, Wis.
 Wyoming Public Health Ass'n, Citizens' National Bank Bldg., Cheyenne, Wyo.



Modern Health Crusader's

CERTIFICATE OF ENROLLMENT



THIS Certifies That

Has done at least 75% of the Crusaders' health chores for the number of weeks required for first honors in health knighthood; has agreed to try (1) to do nothing that may hurt the health of any other person, (2) to help keep home and town clean, and (3) to keep the Crusaders' health rules until the end of December following this school year; and, therefore, is enrolled until then as a Modern Health Crusader with the title of Squire.

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Crusader Master (Teacher)

Health



Rules

1. Keep windows open or stay outdoors when you sleep, play, work or study. Breathe *fresh* air always and through your nose. Take deep breaths every day, with exercise.
2. Play and exercise daily. If you are undernourished, have a rest period in the daytime and exercise only lightly.
3. Eat wholesome food, including fruit, coarse breads, whole-grain cereals, and vegetables such as carrots, onions and greens. Avoid fried foods, soggy breads, pickles, spices; much meat, pie crust, cake and sweets; and all impure candy. Chew thoroughly. Have three meals a day. Drink, slowly, at least two glasses of unskimmed milk, pasteurized or pure. Drink plenty of pure water.
4. Wash your hands always before eating or handling food. Wash ears, neck and face and clean your fingernails every day. Bathe your whole body twice a week at least and shampoo often. Brush your teeth thoroughly after breakfast and supper. Remove food between teeth. Have all cavities in your teeth filled. Consult a dentist twice a year. Have a complete

physical examination each year. Have a regular time every day for attending to toilet. Through right diet and exercise see that you eliminate freely.

5. Get a long night's sleep, going to bed at an early, regular time.
6. Keep fingers, pencils and everything likely to be unclean out of your mouth and nose. Drink no tea, coffee nor drinks containing injurious drugs. Do not smoke or use tobacco in any form.
7. Keep your mind clean. Be cheerful and courageous. Be sincere in what you say.
8. Sit and stand up straight. Lying down, be long. Hold reading matter not less than 12 nor more than 18 inches from your eyes; if less or greater distance is "natural," consult an oculist.
9. Be helpful to others. Whenever you cough or sneeze, turn your head aside and cover your mouth with your handkerchief. If you must spit, spit only where it will be removed before person or fly can touch it. Keep your clothes and books neat. Brush your shoes before school.



From the Modern Health Crusade posters of the National Child Welfare Association, New York

Monthly Weight Record

	YEAR 192				YEAR 192							
	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.
My birthday is in the month checked <input type="checkbox"/>												
My height is.....												
Normal weight for height and for age at nearest birthday*.....												
My actual weight each month.....												
Difference between normal weight and mine.....												
Gain, in ounces, from last month..... (If there is loss, mark figures minus (-).....)												

*If your last birthday was less than 6 months ago, take your age then in using tables below; if it was more than 6 months ago, take your age at your next birthday. Weigh yourself, without shoes or coat, on the same day each month as nearly as possible. Measure your height in the first month of this record and again 6 months later.

Normal Weight Tables for Height and Age

HEIGHT INCHES	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
39	35	36	37											
40	37	38	39											
41	39	40	41											
42	41	42	43	44										
43	43	44	45	46										
44	45	46	47	48										
45	47	48	49	50	51									
46	48	49	50	51	52									
47	51	52	53	54	55	56								
48	53	54	55	56	57	58								
49	55	56	57	58	59	60								
50	57	58	59	60	61	62								
51	59	60	61	62	63	64								
52	61	62	63	64	65	66								
53	63	64	65	66	67	68								
54	65	66	67	68	69	70	71							
55	67	68	69	70	71	72	73	74						
56	69	70	71	72	73	74	75	76	77					
57	71	72	73	74	75	76	77	78						
58	73	74	75	76	77	78	79	80	81	82				
59	75	76	77	78	79	80	81	82	83	84	85			
60	77	78	79	80	81	82	83	84	85	86				
61	79	80	81	82	83	84	85	86	87	88	89			
62	81	82	83	84	85	86	87	88	89	90	91			
63	83	84	85	86	87	88	89	90	91	92	93			
64	85	86	87	88	89	90	91	92	93	94	95			
65	87	88	89	90	91	92	93	94	95	96	97			
66	89	90	91	92	93	94	95	96	97	98	99			
67	91	92	93	94	95	96	97	98	99	100	101			
68	93	94	95	96	97	98	99	100	101	102	103			
69	95	96	97	98	99	100	101	102	103	104	105			
70	97	98	99	100	101	102	103	104	105	106	107			
71	99	100	101	102	103	104	105	106	107	108	109			
72	101	102	103	104	105	106	107	108	109	110	111			
73	103	104	105	106	107	108	109	110	111	112	113			
74	105	106	107	108	109	110	111	112	113	114	115			
75	107	108	109	110	111	112	113	114	115	116	117			
76	109	110	111	112	113	114	115	116	117	118	119			

BOYS

About what one should gain each month

Boys
Age Ounces
5 to 8 6
8 to 12 8
12 to 14 12
14 to 16 16
16 to 18 8

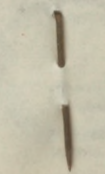
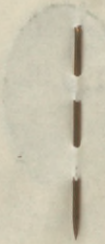
Girls
5 to 8 6
8 to 11 8
11 to 14 12
14 to 16 8
16 to 18 4

HEIGHT INCHES	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
39	34	35	36											
40	36	37	38											
41	38	39	40											
42	40	41	42	43										
43	42	43	44											
44	44	45	46											
45	46	47	48											
46	48	49	50	51										
47	49	50	51	52	53									
48	51	52	53	54	55	56								
49	53	54	55	56	57	58								
50	55	56	57	58	59	60								
51	57	58	59	60	61	62	63							
52	59	60	61	62	63	64	65	66						
53	61	62	63	64	65	66	67	68	69					
54	63	64	65	66	67	68	69	70	71	72				
55	65	66	67	68	69	70	71	72	73	74	75			
56	67	68	69	70	71	72	73	74	75	76	77			
57	69	70	71	72	73	74	75	76	77	78	79	80	81	
58	71	72	73	74	75	76	77	78	79	80	81	82	83	84
59	73	74	75	76	77	78	79	80	81	82	83	84	85	86
60	75	76	77	78	79	80	81	82	83	84	85	86	87	88
61	77	78	79	80	81	82	83	84	85	86	87	88	89	90
62	79	80	81	82	83	84	85	86	87	88	89	90	91	92
63	81	82	83	84	85	86	87	88	89	90	91	92	93	94
64	83	84	85	86	87	88	89	90	91	92	93	94	95	96
65	85	86	87	88	89	90	91	92	93	94	95	96	97	98
66	87	88	89	90	91	92	93	94	95	96	97	98	99	100
67	89	90	91	92	93	94	95	96	97	98	99	100	101	102
68	91	92	93	94	95	96	97	98	99	100	101	102	103	104
69	93	94	95	96	97	98	99	100	101	102	103	104	105	106
70	95	96	97	98	99	100	101	102	103	104	105	106	107	108
71	97	98	99	100	101	102	103	104	105	106	107	108	109	110
72	99	100	101	102	103	104	105	106	107	108	109	110	111	112
73	101	102	103	104	105	106	107	108	109	110	111	112	113	114
74	103	104	105	106	107	108	109	110	111	112	113	114	115	116
75	105	106	107	108	109	110	111	112	113	114	115	116	117	118
76	107	108	109	110	111	112	113	114	115	116	117	118	119	120

GIRLS

Prepared by Dr. Thos. D. Wood





MAY	JUNE	JULY	AUG

1912 1913 1914 1915 1916

1917 1918 1919 1920 1921



Modern Health Crusade

Brief Explanation



N. B.—This circular and the "Record of Health Chores" (which must be read to supplement this circular) explain the necessary part of the Crusade program. It is well to read also the certificate of enrollment and the guide to tournaments. The complete program, including optional and advanced parts, is set forth in the manual.

WITHIN the last four years millions of American school children have been systematically working to qualify as Modern Health Crusaders. For the schools the Crusade is a system of teaching that imparts good health habits. Through elements of play and romance and various appeals suited to child psychology, it gives children the motive needed for the practice of hygiene. Under the Crusade method pupils *do* the duties that are explained in books of physiology and hygiene but too often left undone.

The results of a Crusade course are physical and moral improvement, prevention of disease, and better attendance and attention at school. The Crusade links the school and the home, reaching the pupils' parents.

WHO CRUSADERS ARE

Modern Health Crusaders are children not less than six years old who qualify by doing the official health chores. Adults may also qualify through the senior health chores. The certificate of enrollment states that the boy or girl named "has done at least 75% of the Crusaders' health chores for the number of weeks required for first honors in health knighthood; has agreed to try (1) to do nothing that may hurt the health of any other person, (2) to help keep home and town clean and (3) to keep the Crusaders' health rules until the end of December following this school-year; and, therefore, is enrolled until then as a Modern Health Crusader with title of Squire."

RECORD OF HEALTH CHORES

The teacher should read the "Record of Health Chores" before proceeding further with this circular. It is published in primary, standard (intermediate) and senior editions. The standard record may be used for all school grades below the ninth. The senior record is for high school pupils and for persons over 16 years old. It may be used for the seventh and eighth grades, at the teacher's discretion. The primary record is only for grades 1, 2 and 3.



TITLES AND BADGES

During the weeks in which one does the health chores before becoming a Crusader and Squire, he is a Page. By continuing the chores, a Crusader ad-



vances progressively from the rank of Squire to Knight and Knight Banneret. Beautiful buttons, pins and ribbons are provided as badges for titles higher than Squire. The designs of certificate and badges are changed every year. Schools awarding titles "Advanced Order" for the performance of chores over 30 or more weeks in one school, year commonly present Knights Banneret, A.O., with the red ribbon of that rank, to be worn under the Knight Banneret pin or button. Schools may, however, omit the ribbon and distribute over 30 weeks the certificate and badges usually awarded for the first 15 weeks. Under this method, they convey the titles of Squire, A.O., Knight, A.O., and Knight Banneret, A.O., after 10, 20 and 30 weeks, respectively.

KEEPING RECORDS

The chore records are kept at home for recording performance daily. The teacher may, however, keep primary records at school, not requiring signing by the parent, *provided* that the teacher, or the child under her direction and questioning, check off each day his performance for the preceding day (including Friday and Saturday with Sunday) and provided that under daily inspection she verify performance of all chores subject to inspection. The "Prompter and Hygienic Inspection Blank" will prove of great profit for all elementary grades and for both standard and primary chore records. The teacher's approval is required for each chore record before the pupil acquires a title. If inspection indicates that chores were not done thoroughly, she may veto the claim, declining to sign the record.

CRUSADE ADAPTABLE TO EVERY SCHOOL

The Crusade system has been made a curriculum activity in thousands of schools. Credits are given for the work, ranging as high as 50% in courses in hygiene and physiology, as explained in the manual. If a school allows no time for Crusade work, the teacher may nevertheless give the pupils a large part of its benefit by distributing chore records, after a short explanation, for each pupil to take home. After the number of weeks required for each title, the pupil brings his record to the teacher. She then issues to him a second record and at her leisure inspects the first one and awards certificate or badge, if earned. Crusade work can be carried on at any time and for as many or few weeks as the teacher wishes.

TOURNAMENTS

Conducting the health chores and the reward of pupils are all that is *necessary* in Crusade work. Among the optional features, the tournaments will be found especially helpful in making pupils faithful to their chores. Crusade tournaments are competitions between schools or classes for the best average record by pupils in the performance of chores. The National Tournament of Health Knighthood is conducted twice during the school year. Every class or school (with an enrollment as large as ten) becomes a jousting by keeping the records of its pupils' performance of chores over 15 consecutive weeks, and by submitting a report. Any period of 15 weeks may be selected by the school, between the first Sunday in September and the last Saturday in February, and between the first Sunday in January and the second Saturday in June. For the rules, ask for the tournament guide circular. Hundreds of schools have won national pennants.

WEIGHING AND MEASURING

Performance of the Crusade chores tends to give pupils right weight. Monthly weighing, with the recording of actual and normal weights, is an optional feature of Crusade work recommended to every school. Tables of normal weights for boys and girls are printed on the Roll of Health Knighthood. This is a classroom chart for posting the pupils' weights from month to month, and also the Crusade titles earned and the credits in tournaments. Colored stars may be placed on the chart as rewards.



PROGRESSIVE PROGRAM

For schools that make a place for practical health instruction, the Crusade offers a program to fit the amount of time allowed. All or part of the following features may be carried out: accolades (knightings), playlets, pageants, motion pictures, monthly entertainments for health instruction, coordination of Crusade work with other studies, hygienic inspection, health clubs, and sanitation campaigns.

As candidates to become Knights of the Round Table, the highest distinction in the Modern Health Crusade, pupils take a unique interest in phys-

SAVE OTHERS!



Disinfection of Private Houses Following Tuberculosis

(Published by the Pennsylvania Tuberculosis Society.)

DISINFECTION is the process by which the germs causing infectious diseases are destroyed. The agents used for this purpose are called disinfectants.

There are three kinds of disinfectants used in cases of consumption; namely, heat, chemical agents, and sunlight. There are two ways in which heat may be applied; namely, fire and boiling. The best disinfectant that we have in any infectious disease is fire. Everything that has come in contact with the patient which can be burned should be burned. The second best disinfectant that we have is boiling. Everything that must be saved and can be boiled should be boiled. After fire and boiling the best disinfectant at hand in a private house is a generous use of soap and water and exposure to sunlight.

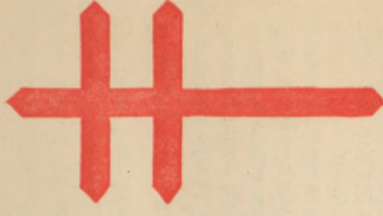
A patient dies with tuberculosis in a private house—how is the room in which he lived to be disinfected?

First: everything in the room that is no longer useful should be burned. Newspapers, magazines, fans, old linen or wearing apparel, useless furniture, all should be disposed of by fire.

Second: eating utensils, knives, forks, spoons, plates, cups, saucers, glassware, vases, crockery, bed pans, tin-ware, linen and wearing apparel should be boiled.

It is not sufficient to roll clothes into a bundle or pack them tightly in a boiler and leave them only until the water simmers. It

GET
WELL



IN
WESTMORELAND

SAY IT WITH VOTES

FEAR—THE BOGEY MAN

Do you value your health?

If so, read this pamphlet from cover to cover.

Why are you afraid of tuberculosis?

Because many have tuberculosis who do not know it, are careless, cough and spit recklessly, and throw off germs in a wholesale manner.

Because of this wholesale infection tuberculosis claims more lives than any other preventable disease; death rates per 100,000 are:

Scarlet Fever.....	2.8
Measles.....	3.9
Typhoid Fever.....	9.2
Diphtheria.....	14.7
Tuberculosis.....	125.6

How does fear prevent cure and control?

Because if you have tuberculosis you don't want anyone to know it; you don't want your doctor to tell you; if one of your family succumbs to a "complication" which involves tuberculosis, you demand that the word tuberculosis be hushed and ignored.

How can we wipe out this fear?

By teaching that tuberculosis is curable in the early stage; that cleanliness means destroying sputum (spit); that destruction of sputum means less infection, and by taking measures to control infection. Also by making it fashionable to say "When I had tuberculosis."

Can we wipe out tuberculosis?

Framingham, Mass., cut its tuberculosis death rate in halves in four years. If all "active cases" were hospital-

ized, all food containing tubercle bacilli destroyed and other necessary precautions taken, tuberculosis would be controlled.

HEALTH IN WESTMORELAND

What is the toll of tuberculosis in Westmoreland?

Tuberculosis killed 1092 persons in Westmoreland in 5 years, at least 218 each year that we know about.

Were there any deaths that we do not know about?

Yes. Because of fear many certificates read "pulmonary complications," "bronchial asthma," "chronic bronchitis," etc., when death was probably due to tuberculosis.

Why is tuberculosis termed an "industrial" disease?

Because tuberculosis claims its victims during the industrial age; because tuberculosis claims every third person dying between the ages of 15 and 60 years, and every fourth person dying between 20 and 50 years.

Why should we be so interested in "industrial diseases"?

Because Westmoreland is part of the greatest industrial center of the world.

THE PRICE WESTMORELAND PAYS

What does each death from tuberculosis cost?

Each of our 218 annual deaths average 8 to 10 living, active infections.

The life of a wage-earner is worth \$5000 to the community. 655 of our 1092 victims were wage-earners, an economic loss to this county of over \$3,000,000.

Who bears this loss?

The tax-payer in the form of Mothers' Pension, county

relief, care of orphans; also churches, fraternal bodies, Red Cross and all philanthropic men and women.

In one Westmoreland town in one month in 1919 when employment was plentiful 59 families applied for relief. In 53 of these families tuberculosis was the cause of dependency.—(Union Aid Association, Jeannette.)

A COUNTY TUBERCULOSIS HOSPITAL

How can Westmoreland check tuberculosis?

By establishing a tuberculosis hospital where patients can be kept under medical supervision, taught sanitation and proper routine of living.

Why can't the State undertake this work?

Because Pennsylvania has 9160 deaths from tuberculosis annually and 100,000 living, active cases to crowd into its 2000 free beds and its 2000 private beds. This means thousands of patients left at home to shift for themselves.

Why not enlarge the state sanatoria?

Because the county system secures more adequate provision; because patients are more contented and willing to take the cure if they can be kept in their home environment where their families can visit them often.

How are other states meeting this problem?

By securing county hospitals. Connecticut, New York, Massachusetts, Rhode Island, California, New Jersey and Illinois each have more beds in proportion to deaths than Pennsylvania.

How many beds are necessary?

Minimum standards accepted by medical experts require one hospital bed for each annual death due to tuberculosis.

the direction of State authorities and with local headquarters on the second floor of the Y. M. C. A. building a canvass of the various schools in the city and county has been made. The workers distribute literature, some of which is shown here, to the school children and their families. "Crusades" are organized for the purpose of exciting deeper interest on the part of the children. To date this has been fairly successful.

District Nursing and Social Service:

One district nurse is on duty within the town. Thus far there has been no indication for any more elaborate organization of this form of social service since the population embraces, on the whole, but a limited number of families that are so destitute that other means of proper care are not found. There is no regularly organized social service department at the Hospital. The Salvation Army cares for isolated cases, and private individuals interested in this form of philanthropy, of which there are many, come to the rescue in those neglected cases which are not otherwise looked after. Ministers of the town and the Y. M. C. A. have been most generous in each instance when called upon to serve.



The south wing of the Westmoreland Hospital. This institution is located in the western part of the town, on Bunker Hill. It has a capacity of one hundred and twenty-five beds, with an East Medical, and a West Surgical ward, two operating rooms; an obstetrical delivery room; the entire second floor is given over to private patients. At present a new Nurse's Home is under construction facing West Pittsburgh Street.

City Planning:

It is said that Greensburg is the third wealthiest town for its size in the entire country. Yet there is no public park; there is no library; there is a very noticeable lack of interest in civic welfare. Playgrounds for the children, each with a trained worker on duty during the summer months, are located, one on Maple Avenue and another in East Greensburg. Huff's Park is located on the northern limit of the town. This is a driveway through a beautiful estate. An open air swimming pool is located just off South Main Street, and conducted by John Eisaman. In the winter it is used for ice skating.

Greensburg residents frequent the environs of Pittsburgh, the nearby metropolis. They seem unaware of the shortcomings of their native town. The Academy Hill section, and Underwood, exhibit pride in the appearance of their districts as seen by their well kept lawns, pretty houses, pleasant driveways and progressive upkeep.

Plans for civic improvement are yet to be begun in this community.

S U M M A R Y

SUMMARYConditions found:

A sanitary survey of Greensburg reveals many commendable features. The town is excellently located from an industrial and commercial point of view. Concerning its location as a healthful community, many like sized towns are better situated but still many others are worse located. The proximity of the coal fields renders this location for a residential town less desirable. The population is respectable and law-abiding.

The water-shed fulfills its purpose and gives good wholesome water to the population. It is in no way threatened by contamination, as heretofore discussed. The sewage system remains a point of dispute. It is functioning efficiently at the present time. How long the necessary sulphur water will be furnished by the mines is a point of conjecture.

The disposal of the town's refuse has been cared for in a satisfactory manner insofar as collection is concerned.

The writer has met with considerable difficulty in the search for vital statistics. The authorities have been courteous and lent their support, but the methods for recording

important and necessary data have been unsystematic.

Greensburg's milk supply presents varying degrees of efficiency in handling, as well as the purity of the article in the hands of the consumer.

Sanitary nuisances are comparatively few and those that have arisen have been quickly and well handled.

As a community, Greensburg is self-satisfied. It finds that existing conditions function in a way acceptable to the majority.

Criticisms:

A quickening of interest in the civic welfare, as well as the sanitation of the town, on the part of the present population, would speedily establish the town on a sound progressive basis. As it is now, the welfare and future status gives no one much concern. There has never been any suggestion on anyone's part for the institution of a public library.

Progressive movements by the School Board to relieve the congestion in the schools by further building have met with persistent rebuffs from the voting populace.

The health of the community rests secure and safe in the hands of the Secretary of the Board of Health, Mr. Samuel Clemens. The establishment of a complete functioning system for vital statistics is greatly to be desired.

The sewage system as it now is functions properly and satisfactorily. To have a ready solution for sewage disposal if the sulphur is not furnished by the mines is a wise look into the future. An incineration plant will soon be constructed so that the garbage and refuse will be satisfactorily disposed of.

To interest the entire population of the town sufficiently that they would appreciate the possibilities of Greensburg to become a beautiful town, with a healthy amount of civic pride, is the principal indication for securing a better town.

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