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THE MEDICAL BULLETIN

JULY, 1939

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CONTENTS

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Editorial

Editorial . . . L. J. Ferenczi, M.D.

ORIGINAL ARTICLES

Medical Statistics for 1938 48
A. W. Schoenleber, M.D.

Office Lighting 75
James M. Adams, M.D.

Malaria - Always a Tropical Problem 87
P. Tekelenburg, M.D.

Food Handler as a Transmitter of Amebiasis 92
A. W. Schoenleber, M.D.

ANNUAL MEDICAL REPORTS

Standard Oil Company of Louisiana, Manufacturing Department 98
Summary of Medical Activities 1938
I. L. George, M.D. and C. M. Allen, M.D.

International Petroleum Company Limited, Medical Report
for 1938 110
Lewis H. Fraser, M.D.

CASE REPORTS

Intestinal Infestation with Taenia Saginata 118
B. B. R. Burns, M.D.

Eight Year Old Mother 120
F. Ovalle, M.D., et al.

Acute Gonorrheal Endocarditis 124
K. R. Fourcher, M.D.

Rupture of Ileum Due to Direct Violence 127
B. B. R. Burns, M.D.

Short News 129

Editors Note 131

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STANDARD OIL COMPANY OF LOUISIANA
MANUFACTURING DEPARTMENT
SUMMARY OF MEDICAL ACTIVITIES
1938

I.L. George, M.D. and C. M. Allen, M.D.
Baton Rouge, La.

Organization

The Medical Department is organized for the purposes of
conducting periodic examinations of all Refinery employees;
employment and lay-off examinations; conducting special
examinations for retirement or retention in service, special
examinations for illness that might be created by industrial
injuries, and foreign service examinations; treating of all
minor and major injuries that occur on the job; supervising,
where feasible, giving advice to our employees who are on
sick leave; attempting to build up a better and more ef-
ficient personnel in the future by means of various psycho-
logical tests; treating at the Refinery Hospital conditions
of a chronic nature received off the job that will aid the em-
ployee to stay at work; supervising the sanitation of the Re-
finery and the placement of men in positions which they can
adequately fill because of various physical or mental dis-
orders; conducting immunization against colds, boils and
other diseases; and frequently giving vaccines recommended by out-
side doctors in order to keep the men on the job (many pa-
tients bringing their own vaccine prescribed by physicians to
be given while going to town for treatment), and in general serving
as medical advisors to the employees and the Management in
all matters which they may present.

Personnel

Personnel of the Medical Department consists of four-
teen individuals; two full-time physicians, who do examina-
tions and supervise in general the entire work of the Medical
Department; two nurses, one who spends practically her entire
time on the road visiting sick employees and giving them what-
ever advice she can to aid in their early recovery, and the
other whose duties consist of general supervision of the hos-
pital, keeping up supplies and giving intelligence tests; one
laboratory technician, who takes care of all laboratory examinations as

well as the x-ray department, and is the official photographer for the Refinery; one secretary to the doctors, who handles all the records going into the New York office, has charge of the writing up of all sick cases and register cards, and is in charge of all general correspondence for the department; one chief clerk, who handles all routine records in the department, notifies all employees when to report for their examinations (periodic and special), takes care of posting all transfers, has charge of keeping time records and making of the schedule by which the first-aid men work, and is available for first-aid work when necessary; six first-aid men, four of whom are on shift duty, one, who assists in posting minor treatments on the MD-5's, has charge of preliminary handling of all examinations for the doctors, such as testing eyes, hearing and doing urinalyses, while another, is assigned to the physiotherapy department and is kept busy all day giving diathermy and Infra red treatments, massages, whirl pools, baths, and ultra violet and galvanic treatments; and a hospital porter.

Reports

During the latter part of the year three papers were written on work done in the Medical Department of Baton Rouge Refinery. The first was a paper entitled "PRELIMINARY REPORT ON SICKNESS AT THE BATON ROUGE REFINERY,"* in which it pointed out that the sick report had been materially lessened by the use of a fulltime visiting nurse and close supervision of the sickness records. The next paper was a report on "12 MONTH STOOI EXAMINATIONS AT BATON ROUGE REFINERY," in which it was shown that 5.33 per cent of the employees were infested with intestinal parasites. The actual treatment for the first cases amounted to \$51.50, which was paid for by the Company. The stool examinations completed on December 31, 1938, with 1539, with 86 positive stools. This work is to be continued until the entire Refinery has been checked; and the Medical Department suggests that this procedure be included in the preemployment examination as well as, where indicated, in the employees. The third paper is on "THE USE OF EUCUPIN (an analgesic) IN THE TREATMENT OF CERTAIN TYPES OF LOW BACK PAIN." It is extremely interesting to note that with this treatment the Medical Department has been able to estimate a seventy-eight per cent reduction in disability resulting from this type of condition, and since the institution of this treatment there has been very little loss of time due to back pain.

Intell

Within the next few months to present to the Management work with intelligence to will help establish standard higher type of personnel

The Medical Department incidence of syphilis and attempt to correlate the who are afflicted with it since there is no Public Schoenleber suggested the port to obtain medicine the State Board of Health accomplished, employees with syphilis at the Refi

Boil

Recently the Medical Department (2%) in which it in the treatment of was rather surprising treatment of boils having so much trouble to prevent sleep. (to coin the pain was immediate began to heal. The with the use of this a report on its use

Recently the Management chronic alcoholics in the aging, if possible might they have set up not as yet "gotten who feels that alcohol will not be able to of alcoholism and

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Intelligence Tests

Within the next few months the Medical Department expects to present to the Management the results of their experimental work with intelligence tests. It is hoped that this research will help establish standards that will aid in building a better type of personnel in the future.

Syphilis

The Medical Department is also preparing a paper on the incidence of syphilis among the colored employees and will attempt to correlate the accident and sickness rates in those who are afflicted with this disease and those who are not. Since there is no Public Health unit in Baton Rouge, Doctor Schoenleber suggested that the Medical Department make an effort to obtain medicine for the treatment of syphilis from the State Board of Health free of charge; and should this be accomplished, employees would then be able to obtain treatment for syphilis at the Refinery Hospital without cost to them.

Boils and Carbuncles

Recently the Medical Department has been using Allantoin ointment (2%) in which is incorporated Chlorobutanol 0.5 percent in the treatment of chronic ulcers, and during the process was rather surprised that it has an excellent effect in the treatment of boils and carbuncles; in fact, one patient was having so much trouble from a large carbuncle on his leg as to prevent sleep. On the first day of application of Allantoin the pain was immediately relieved and the sloughing area began to heal. The Medical Department is quite impressed with the use of this ointment and at some future date may have a report on its use in various conditions.

Alcoholics

Recently the Management came to the conclusion that many chronic alcoholics in the employ of the Company would be worth salvaging, if possible to do so. In accordance with this thought they have set up a program whereby any employee who has not as yet "gotten his business in a jam," so to speak, but who feels that alcohol has gotten such a hold on him that he will not be able to break it, may go to an institution for a cure of alcoholism and during his stay there the Company

will pay him his regular sickness benefits. At the present time five out of nine have accepted this offer from the Company.

Heat Exhaustion

About July 1, 1938, the Medical Department was being required to treat quite a few heat exhaustion cases. It was noted that by far the larger percentage of these came from the coke stills. Upon investigation it was found that the colored workmen on these stills were apparently not taking their salt tablets. Following the work done by the Harvard Fatigue Commission at the Youngstown Sheet and Tube mills and Boulder Dam, the Medical Department requested that a level teaspoonful of table salt be placed in each gallon of drinking water, this being a .1 of one per cent solution of salt water which when taken internally would replace the amount of salt lost in sweat. Following this there were no further complaints from heat exhaustion and the foreman stated he was able to get much more work out of his men without their becoming nearly so exhausted. During the latter part of the year thirty-six portable sanitary pressure drinking fountains have been distributed to the various gangs and it is contemplated next summer using sixteen thin salt wafers of $15\frac{1}{2}$ grains to a full gallon sanitary pressure drinking fountain instead of measuring the salt by teaspoon.

Periodic Examinations

There were 2,452 periodic examinations made during the year, 1,911 of which were done within the last six months in an effort to bring the schedule up to date.

During July 1938 the records of the entire personnel were checked and dates for periodic examinations set up by the method developed by Dr. Jas. M. Adams, which is as follows: Employees between the ages of twenty to thirty are to be examined every three years; employees between thirty and forty would be due an examination every two years; employees between forty and fifty would be due every eighteen months; employees between fifty and sixty every year, and from sixty to sixty-five every six months. According to this schedule the department is due to complete 1,945 periodic examinations during the year 1939. This does not include special examinations. These examinations are so arranged that five men report to the hospital at 7:30 in the morning, five at 8 o'clock, five

at 8:30 o'clock and five at 9 o'clock. A quota of periodic examinations is assigned to the medical officers to direct more work and industrial

Employees

During the year 1938, 1,911 periodic examinations were made and in the last six months 1,911 were given to the employees. During the month of August a physical fitness test, using a stadiometer, was given. By the end of the year 1938, 568 tests had been given. The intelligence examination was given to all men leaving the plant. All men leaving the plant were examined before leaving. When a man was injured that had not been laid off but was not reached, at the Medical Department for treatment, the Medical Department took all materially curtailed. There were approximately 1,911 during the year.

Losses

A very detailed record of the year was just completed. The last six months were not included. On September 25th, it was found that there were 52 employees in the plant. There was a total of 30,486 industrial accidents and total for sick leave was 15 cases losing a

the present 8:30 o'clock and usually by 9:30 or 10 o'clock the day's quota of periodic examinations is completed, allowing the doctors to direct more time to sickness cases, first-aid and industrial research.

Employment and Lay-off Examinations

as being re-examined. It was found that the color blindness tests were given to those new employees; however, starting in the month of August each new applicant was given an intelligence test, using the Otis General Intelligence Examination. By the end of the year approximately 125 of these tests had been given to new employees. This, in conjunction with 568 tests given to old employees, makes a total of 693 intelligence examinations given during the year 1938.

All men leaving the service of the Company in 1938 for any reason were examined by the Medical Department at the time of their leaving. When the examination showed a major or minor injury that had not reached maximum improvement the employee was not laid off but kept on the rolls until maximum improvement was reached, at which time he was then approved by the Medical Department for lay-off. It is the feeling of the Medical Department that the handling of cases in this manner will materially curtail the number of industrial controversies. There were approximately 912 such examinations made during the year.

Lost Time Sickness Cases

A very detailed report on sickness statistics for the past five years was just recently compiled and forwarded to those interested. The last two months - November and December - of 1938 were not included. Briefly reviewing the report made November 25th, it has been found that there was an average of 1,552 employees in the Manufacturing Department during 1938. There was a total of 2,044 sick cases during the year who lost a total of 30,486 days. In addition, there were 101 non-industrial accidents who lost a total of 1,920 days, the total for sickness and non-industrial accidents being 2,145 cases losing a total of 32,406 days.

Daily Ineffective Rate Per 1000 Employees from Sickness

1933.....	14.9
1934.....	13.2
1935.....	16.5
1936.....	17.7
1937.....	13.6
1938.....	14.4

Frequency Rate

The frequency rate (number of employees off sick per 1000) for the year 1938 is 461 per 1000 employees, the rate for 1937 being 536 per 1000.

Days Lost Per Employee

1934.....	4.8
1935.....	6.0
1936.....	6.5
1937.....	7.4
1938.....	7.0

Days Lost Per Case

1934.....	12.9
1935.....	14.8
1936.....	12.5
1937.....	13.7
1938.....	15.1

The days lost per case increase in proportion to the cases of prolonged illness.

A Comparison of the Last Six Years of the Amount Paid in Sickness Benefits to Salaried Employees and Wage Earners

Year	Total Benefits	Av. Per Month
1934	\$ 37,460.89	\$ 3,121.74
1935	38,440.28	3,203.36
1936	47,845.11	3,987.10
1937	76,312.46	6,359.37
1938	113,747.50	9,478.95

Full-time benefit for the first seven months following the installation of the new benefit plan. \$41.60 were paid for the average for the average for the records indicate how to maintain a full-time ambulatory cases periodically until

Sick

During the year 1938, 100 cases were seen at the clinic. The Medical Department has more than those who described some type of illness. The Hospital Association has been given at the Refine

The sanitary square is taking care of the water. There are still remain the boxes which are being managed.

The program of the water is being continued. As stated previously, the drinking fountains are drinking fountains and bucket

will be used. At the present time, various points in the water are being placed in place. This seems to be the Department had in order to prevent the water in the water, the water at the ice house proper temperature in it. In vi

Employees

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Full-time benefits went into effect in August, 1937. For the first seven months of 1938, \$74,305.90 were paid out and following the institution of a full-time visiting nurse \$41.60 were paid out the last five months of the year. The average for the first seven months was \$10,615.13 and the average for the last five months was \$7,888.32. The above records indicate how important it is that the Medical Department maintain a full-time visiting nurse. This nurse urges ambulatory cases to report to the Company doctors' office periodically until they are able to return to work.

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Sickness Cases Not Losing Time

..4.8
..6.0
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..7.4
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During the year 9,718 sick and non-industrial accident cases were seen a total of 23,426 times for advice and treatment. The Medical Department made no attempt to treat cases other than those who were ambulatory or who had been prescribed some type of treatment by the Stanocola Medical and Hospital Association or their family physician which could be given at the Refinery Hospital while they remained on the job.

Plant Sanitation

12.9
14.8
12.5
13.7
15.1

The sanitary squad organized in 1937 continues to function in taking care of the bathrooms and toilets in the Refinery. There still remain a number of old bathrooms under the containers boxes which are gradually being eliminated by the management.

The program of the prevention of athlete's foot infection is being continued by the use of Penchlor.

a to the cases

As stated previously, thirty-six portable sanitary pressure drinking fountains have partially replaced the water barrels and buckets. If these prove successful, no doubt, they will be used.

the Amount
l. Employees

At the present time it is a practice to deliver ice to various points in the Refinery and this is handled by employees in being placed in the portable sanitary drinking fountains. This seems to partially defeat the idea the Medical Department had in mind in recommending the fountains. In order to prevent handling of ice and placing the ice directly in the water, the Medical Department intends recommending a coil at the ice house where the water will be kept at the proper temperature and it will not be necessary to place the ice in it. In view of the size of the Refinery there will

month
..74
..36
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..95

probably be some objections; however, it is hoped that the can be overcome and at no place will there be ice in drinking water.

An attempt will be made by the Medical Department to lower the malaria rate this summer and to eliminate mosquito breeding areas. It also hopes to reduce the rat population at the Refinery by cleanliness and the installation of covered garbage cans in areas where employees eat their lunch.

Occupational Disease Hazards

Solvent Dewaxing Plant

From time to time there is an occasional complaint of nausea by an employee working at the Solvent Dewaxing plant; however, the Medical Department has actually seen no evidence of illness caused by the fumes at this plant. It was usually found that the men who complained either had not been following the safety regulations or they were using those complaints in order to be transferred to some other department. When a man complains of his work around the Dewaxing plant, the Medical Department has made every effort to have him transferred to some other part of the Refinery. The plant is running at reduced capacity and permits a better control from a medical standpoint.

Phenol Plants

There have been no serious injuries to men working about these plants; however, the hospital has treated quite a few superficial burns which seem to happen more at the time of a turn-around.

Lead

Special examinations continue to be made on men handling lead, on painters, litharge handlers, laboratory workers handling tetra-ethyl lead, colored employees assigned to cleaning tanks, and also lead burners. These examinations are made twice each year and there has been no evidence of any toxic symptoms.

Benzol

Benzol examinations have been continued but no evidence of toxic absorption found.

Well

Eye examinations normal. However, at the Refinery, it appears that these welders are in a position. One or two welders interfering with work. The welders were normal. They reported their visual field. The welders electric welders. Checked by an oculist.

The vacuum cleaning building is now in operation. The adjustment of the dust control system is in process. The system is in process for about sixty days. At this time on the Refinery. Provisions are being made for asbestos are handled. The lower and duct which are discharged to a point. A study is being made of the Refinery with a point remote from the atmosphere. The atmosphere. Motors and blowers are used for the tool grinders. A ventilation shop. A tool grinder and Un. It has been indicated that it is interesting to see the examination of the employees for many years. An estimation has been made covering the management covering the building where the examinations are carried out. Detailed examination

Welders (Eye Examinations)

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be ice in

Examinations of all welders have revealed nothing abnormal. However, after conversation with the Mechanical Superintendent, it appears that the Medical Department should examine these welders at reading distances as well as distant vision. One or two cases have shown up in which vision was interfering with work, yet when checked for distance their vision was normal. Placing of glasses on these employees corrects their visual difficulties. The Safety Department furnishes electric welders prescription goggles whenever recommended by an oculist.

l complaint

Dust Hazards

Dewaxing plant

The vacuum cleaning system in the Lubricating Filter is now in operation. It appears, however, at this time that adjustments will be necessary in order to properly control the dust cleaning up operations. The dust collection system is in process of installation and will not be completed for about sixty days; therefore, no comments can be made at this time on the unit.

Provisions are being made in the crusher unit where cork and asbestos are handled to control the dust by means of a hopper and duct which are connected to the feed hopper and discharged to a point outside the door.

A study is being made of sand blasting operations at Baton Rouge Refinery with the view of locating a sand blasting shop at a point remote from where men gather, with facilities for controlling the dust and preventing it from being liberated into the atmosphere.

Motors and blowers have been installed in connection with tool grinders and abrasive brushes in the Salvage and Reconditioning shop. Similar units are on hand and will be installed in the near future in connection with the Yankee Grinder and Universal tool grinder in the Machine shop.

It has been indicated by various authorities that it would be interesting to see x-ray pictures of men that had been employed for many years as electric welders and we plan at the next examination of welders to take x-rays of their chests.

An estimation has been prepared and forwarded to the local management covering the installation of a fume removal system in the building where acetylene brazing and welding operations are carried out.

Detailed examinations with x-ray of the lungs of all men

t no evidence

working in dust hazards, including Filter building employees, sand blasters and asbestos workers, are made each year. Some of these individuals there does seem to be some increased markings in the lungs, but it has not been found necessary to make any recommendations for removal of any of these from their occupations.

Chemical Plant

The Chemical Plant has been out of service for some time until recently; therefore, at present it is manufacturing small batches of catalyst for experimental purposes and there are no particular hazards involved.

Laboratories

Examinations are conducted on men in the laboratories to handle lead, Benzol and other toxic materials. To date, no one has been found to show toxic symptoms.

Catalytic Polymerization Plant

The screening of the catalyst prior to charging the towers at this plant presents a dust problem and adequate protection is provided in the open by the use of proven dust respirators. When handling the catalyst in an enclosed area, such as inside the towers, fresh air masks and rubber gloves are used. This catalyst when subjected to moisture will burn the skin and rubber gloves and rubber goggles are used in addition to a respirator whenever handling the material in a moist state.

Proper Placement Of Disabled Employees

The Medical Department continues to have its problems among employees who suffer disabilities of varying degrees. The Management gives their full cooperation in securing placements that is suitable to these disabled men.

Equipment

During 1938 three infrared lights were added to the equipment of the Medical Department. Also six tablet-chairs have been added for the use of men taking intelligence tests. It is anticipated and hoped that the Medical Department will

purchase a machine has late and inadequate and hoped also which the diagnosis, prognosis with this can be furnished the local Medical, no doubt have been many be added anticipate the 1939 but

Examinations - Per
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Laboratory examinations
Examinations
Therapy treatment
Examinations - No Loss
Examinations - Redress
Cases - No Loss
Industrial accidents
Office visits
Industrial accidents
Average number of
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No. of days
No. of cases
No. of days
Average - n
Sickness rate
No. of accidents
No. of days
Average - n
Accident rate
Frequency rate per
Frequency rate per
Lost per case

ing employees to purchase a needed x-ray during the year 1939. The
 ach year. The present machine has been in use for almost twenty years and
 some increase in the machine is obsolete and inadequate.
 ound necessary. It is hoped also that an electrocardiograph will be pur-
 of these machines, which the department feels is very much needed in
 diagnosis, prognosis and treatment of heart cases. It is
 that with this machine more definite and detailed infor-
 mation can be furnished to the New York Medical Department as
 well as the local Management in regard to the status of heart
 cases, and, no doubt, will pay for itself in a very short time.
 manufacture. There have been many requests from employees that this type
 of equipment be added to the Refinery Hospital.
 It is anticipated that a new ambulance will be procured as
 soon as the 1939 budget is approved.

SUMMARY OF ROUTINE WORK

Laboratories	To date	1938
Examinations - Periodic and Special.....		2,796
Examinations - Applicants.....		663
Outside visits by doctor and nurse.....		3,999
Approved for return to duty.....		2,144
Laboratory examinations.....		4,941
X-ray examinations.....		1,184
Physiotherapy treatments.....		3,457
Accidents - No Lost Time.....		3,267
Accidents - Redressings.....		8,962
Sick Cases - No Lost Time.....		8,675
Non-industrial accident cases - No Lost Time.....		1,043
Sick - Office visits.....		20,820
Non-industrial accidents (Office visits) No Lost Time		2,606
Average number of employees.....		4,652
Total No. of cases losing time (Sickness).....		2,044
Total No. of days lost from sickness.....		30,486
Total No. of cases losing time (Non-industrial acc.)		101
Total No. of days lost from non-industrial accidents.		1,920
Daily average - number sick - losing time.....		88.23
Daily sickness rate per 1000 employees.....		18.8
Total No. of accidents - Disabling - NEW.....		25
Total No. of days lost from accidents.....		1,188
Daily average - number accidents - losing time.....		3.25
Daily accident rate per 1000 employees.....		.7
Frequency rate per 1000 employees (sickness).....		439
Frequency rate per 1000 employees (Non-industrial acc.)		22
Days lost per case (sickness).....		14.9

SUMMARY OF ROUTINE WORK (Continued)

Days lost per case (Non-industrial accidents).....	19.0
Days lost per employee (sickness).....	6.5
Days lost per employee (Non-industrial accidents)..	.41
Total visits to Refinery hospital by employees.....	39,12
Average number of visits per employee.....	8.4
Visits to Ref. hospital other than Ref.employees...	1,100
Total hospital visits-Refinery and others.....	40,22
Aptitude examinations.....	69

*See MEDICAL BULLETIN, Vol. 4, No.1, pp.7-13, April 1939.

We have frequently called attention to the fact that many factors other than actual sickness disability must be considered when studying disease frequency rates. The following extract from a monthly report submitted by Dr. Tekelenburg of Soengei Gerong, Sumatra, illustrates the fact that even religious holidays may have an influence on sickness rates.

"As far as the Mohammedans are concerned, this month was their yearly Lent, ending with their New Year, a time which a true native does not want to pass in a hospital, and in order to avoid this "risk" they do not report for sickness during the days before. It is a regular event, that during the Lent and Mohammedan New Year, the hospital is at least half empty, but after the good time is over, patients will very quickly fill the empty beds. Some of these natives that pass their vacation in their native villages will come back with dysentery, malaria or other diseases which they got there and others have been ill for a few days, but did not report."

Editor's Note.

INTERNATIONAL
MEDICAL

The most important factor in adapt himself to the humidity and although here the heated air and humidity are caused by the Humboldt mountains on the other side of the mountain, with diurnal temperature, the sky is often overcast with rain or slight showers during the day. The air is moist and sand and the ground is free from clouds, although at times quite clear. Childhood diseases such as chicken pox, and so on. Typhoid fever were more common than last year. The children and young children of the foremen. Amebiasis in a few cases, abdominal pain. Physical examination of patients before or discharged, all patients receive certificates for malaria, using a gun, et

Ho

The medical center of the company as we have the oil fields. He handles all hospital work. A large store-house has been built and put in a big man. All arti