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1933

reference to dust as an industrial hazard page 72 in committee Report.

See also page 77.

American Railway Association

PROCEEDINGS

OF THE

THIRTEENTH ANNUAL MEETING

OF THE

MEDICAL AND SURGICAL SECTION

STEVENS HOTEL
CHICAGO, ILL.
JUNE 26, 27, 1933

PROCEEDINGS

OF THE

THIRTEENTH ANNUAL MEETING

OF THE

American Railway Association

MEDICAL AND SURGICAL SECTION

HELD AT

STEVENS HOTEL, CHICAGO, ILL.

JUNE 26, 27, 1933

EASTERN PRINTING CORPORATION
NEW YORK, N. Y.
1933

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(Term expires June, 1934)

Dr. W. L. Hartman (Chairman), Medical Director, New York Central Lines, 313 Michigan Central Passenger Station, Detroit, Mich.
Dr. John R. Nilsson (First Vice-Chairman), Chief Surgeon, Union Pacific Railroad, 1416 Dodge Street, Omaha, Neb.
Dr. J. R. Garner (Second Vice-Chairman), Chief Surgeon, Western Railway of Alabama, 4 Hunter Street, S. E., Atlanta, Ga.
Dr. Harvey Bartle, Chief Medical Examiner, Pennsylvania System, Philadelphia, Pa.
Dr. George W. Cale, Jr., Chief Surgeon, St. Louis Southwestern Railway, Texarkana, Ark.
Dr. John McCombe, Chief Medical Officer, Canadian National Railways, Montreal, Canada.
Dr. F. E. Smith, Chief Surgeon, Wabash Railway Company, 952 Citizens Building, Decatur, Ill.

(Term expires June, 1935)

Dr. T. R. Crowder, Director, Department Sanitation and Surgery, Pullman Company, Pullman Building, Chicago, Ill.
Dr. J. Frank Dinnen, Chief Surgeon, Erie Railroad Company, 1129 Terminal Tower Building, Cleveland, Ohio.
Dr. Duncan Eve, Jr., Chief Surgeon, Nashville, Chattanooga & St. Louis Railway, 2112 West End Avenue, Nashville, Tenn.

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Association

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OMMITTEES

Direction
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Director, New York Central Lines,
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), Chief Surgeon, Western Railway
Atlanta, Ga.
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, St. Louis Southwestern Railway,

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Railroad Company, 1129 Terminal

Nashville, Chattanooga & St. Louis
ashville, Tenn.

Members
Conference of State and Provincial
a, St. Paul, Minn.
easury Department, Bureau of Pub-
C.

Committee on Nominations

Dr. A. W. Ide (Chairman), Chief Surgeon, Northern Pacific Railway, St. Paul, Minn.
Dr. H. A. Beatty, Chief Surgeon, Canadian Pacific Railway, Toronto, Ont., Canada.
Dr. J. G. Frost, Chief Surgeon, Chicago & Eastern Illinois Railway, Chicago, Ill.
Dr. S. C. Plummer, Chief Surgeon, Chicago, Rock Island & Pacific Railway, Chicago, Ill.
Dr. S. B. Taylor, Chief Surgeon, New York Central Railroad, Columbus, Ohio.

Committee on Disability and Rehabilitation

Dr. Don Deal, (Chairman), Chief Surgeon, Chicago & Illinois Midland Railway, Springfield, Ill.
Dr. J. D. Collins, Chief Surgeon, Seaboard Air Line Railway, Norfolk, Va.
Dr. G. G. Dowdall, Chief Surgeon, Illinois Central System, Chicago, Ill.
Dr. E. V. Milholland, Medical and Surgical Director, Baltimore & Ohio Railroad, Baltimore, Md.
Dr. D. B. Moss, Chief Medical Officer, Chicago, Burlington & Quincy Railroad, Chicago, Ill.
Dr. S. B. Taylor, Chief Surgeon, New York Central Railroad, Columbus, Ohio.

Representative from Committee of Direction

Dr. J. R. Garner, Chief Surgeon, Western Railway of Alabama, Atlanta, Ga.

Committee on Developments Resulting from Physical Examinations

Dr. S. B. Taylor (Chairman), Chief Surgeon, New York Central Railroad, Columbus, Ohio.
Dr. W. N. Blount, Chief Surgeon, Gulf, Mobile & Northern Railroad, Laurel, Miss.
Dr. H. E. Fisher, Chief Surgeon, Chicago, North Shore & Milwaukee Railroad, Chicago, Ill.
Dr. R. J. Graves, Chief Surgeon, Boston & Maine Railroad, Concord, N. H.
Dr. J. F. Roe, Chief Surgeon, Denver & Rio Grande Western Railroad, Denver, Colo.

Representative from Committee of Direction

Dr. Harvey Bartle, Chief Medical Examiner, Pennsylvania Railroad, Philadelphia, Pa.

Committee on Extension of Use of Standard First Aid Packet

Dr. O. B. Zeinert (Chairman), Chief Surgeon, Missouri Pacific Railroad, St. Louis, Mo.
Dr. J. D. Collins, Chief Surgeon, Seaboard Air Line Railway, Norfolk, Va.

Dr. G. G. Davis, Chief Surgeon, Elgin, Joliet & Eastern Railway, Elgin, Ill.
Dr. A. M. Hume, Chief Surgeon, Ann Arbor Railroad, Owosso, Mich.
Dr. A. W. Ide, Chief Surgeon, Northern Pacific Railway, St. Paul, Minn

Representative from Committee of Direction

Dr. T. R. Crowder, Director Department Sanitation and Surgery, Pullman Company, Chicago, Ill.

Committee on Fractures

Dr. S. C. Plummer (Chairman), Chief Surgeon, Chicago, Rock Island & Pacific Railway, Chicago, Ill.
Dr. C. C. Green, Chief Surgeon, Texas & New Orleans Railroad, Houston, Tex.
Dr. C. W. Hopkins, Chief Surgeon, Chicago & North Western Railway, Chicago, Ill.
Dr. A. R. Metz, Chief Surgeon, Chicago, Milwaukee, St. Paul & Pacific Railroad, Chicago, Ill.
Dr. R. C. Webb, Chief Surgeon, Great Northern Railway, Minneapolis, Minn.

Representative from Committee of Direction

Dr. Duncan Eve, Jr., Chief Surgeon, Nashville, Chattanooga & St. Louis Railway, Nashville, Tenn.

DIVISION I—OPERATING

MEDICAL AND SURGICAL SECTION

REGULATIONS

Representatives

1. Representatives of members or associate members shall be Chief Surgeons or other officials engaged in a similar capacity. They shall be officially designated by the members or associate members they represent.

2. Affiliated members may be appointed by the Committee of Direction.

Officers

3. The officers of the Section shall be a Chairman, a First Vice-Chairman and a Second Vice-Chairman.

Committee of Direction

4. There shall be a Committee of Direction which shall consist of 10 representatives of members or associate members within the Section, including the Chairman, the First Vice-Chairman and Second Vice-Chairman of the Section, the past Chairman last holding office and 6 other representatives of members. The Committee shall, in addition, include in its membership the Surgeon-General of the United States Bureau of Public Health Service or a representative to be designated by him, aad a representative to be designated by the Conference of State and Provincial Health Authorities of North America.

5. The Committee of Direction shall conduct the business of the Section, authorize, order, define duties, determine the number of and appoint members of such committees that may be necessary to properly conduct the work of the Section.

6. Regular meetings of the Committee of Direction shall be held semi-annually, the date and place to be decided by the Chairman. Special meetings of the Committee may be held at the call of the Chairman.

7. The Chairman of the Section shall act as the Chairman of the Committee of Direction. In the absence of the Chairman his duties shall devolve upon the First Vice-Chairman. In the absence of both the Chairman and the First Vice-Chairman, the Second Vice-Chairman shall preside. Should the Chairman and both Vice-Chairmen be absent the members shall elect a Chairman pro tem.

Committee on Nominations

8. There shall be a Committee on Nominations to consist of five representatives of members or associate members not officers of the Section.

9. As candidates for the Committee on Nominations, the Committee of Direction shall select the names of ten representatives, five of whom shall be

elected. The candidate receiving the greatest number of votes for membership on the Committee on Nominations shall act as Chairman of that Committee.

10. The Committee on Nominations shall, prior to the annual meeting, select the names of two or more representatives of members or associate members as candidates for Chairman, two or more as candidates for First Vice-Chairman and two or more as candidates for Second Vice-Chairman, and 6 representatives of members or associate members as candidates for the Committee of Direction.

11. Any representative of a member or associate members may, at the annual meeting, nominate for officers or members of the Committee of Direction such representatives as desired, provided that such nominations have been endorsed in writing by ten representatives of members or associate members.

12. The representatives of members or associate members nominated for officers or for the Committee of Direction receiving the highest number of votes, shall be considered elected.

Election

13. The Chairman and Vice-Chairmen shall be elected annually by a majority ballot and shall hold office for one year or until the close of the session at which their successors are elected. The term of office of members of the Committee of Direction shall be two years and 3 members of the Committee shall be elected annually. To provide for the inauguration of the foregoing, 3 members of the Committee of Direction shall be elected at the annual meeting in 1924 to serve for one year and 3 members to serve for two years. At subsequent annual sessions 3 members shall be elected to serve for two years.

14. The election of officers and members of the Committee of Direction and Committee on Nominations shall be by printed ballot and only officially designated representatives shall be entitled to vote. When a ballot for election of officers or members of committees results in a tie such ballot must be retaken.

15. A vote in sessions of the Section may be taken viva voce, by rising, by roll-call or by ballot. If there is any doubt as to the result of a viva voce vote the Chairman can order, or on the request of three members, a roll-call vote shall be taken in accordance with the practice of the American Railway Association, based on the number of memberships held by each member.

Meetings of Committees

16. Meetings of any committee may be held at the call of the Chairman of such committee unless for some special reason notification to the contrary has been issued by the Chairman of the Section.

Annual meeting of the Section shall be held in May or June, the time and place to be designated by the Committee of Direction. Special meetings may be held at the call of the Committee of Direction.

17. If a member of a committee is absent from two consecutive regularly called meetings of the committee, his membership ceases *ipso facto*, and the Committee of Direction shall act as in a vacancy from any other cause.

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18. Should a vacancy occur in the officers of the Section, the Committee of Direction or Committee on Nominations, the Committee of Direction is authorized to appoint a representative to fill such vacancy until the next annual meeting.

General

19. The right to hold office, vote and attend executive sessions shall be vested in representatives of members or associate members only.

20. An executive session of the Section may be held at the call of the Chairman of the Section or at the request of five representatives of members.

21. These Regulations may be amended by a majority vote at any regular or special meeting of the Section, subject to approval by two-thirds of the voting members by a letter ballot.

MEDICAL AND SURGICAL SECTION

Stevens Hotel, Chicago, Ill., June 26–27, 1933.

The following representatives were present:

Members	Representatives
Ann Arbor R. R.	A. M. Hume, Chief Surgeon.
Atchison, Topeka & Santa Fe Ry.	J. P. Kaster, Chief Surgeon.
Baltimore & Ohio Chicago Term. R.R.	E. V. Milholland, Medical and Surgical Director.
Baltimore & Ohio R. R.	E. V. Milholland, Medical and Surgical Director.
Canadian National Rys.	John McCombe, Chief Medical Officer. K. E. Dowd, Medical Assistant. A. O. Beck, Director, First Aid and Accident Prevention.
Chesapeake & Ohio Ry.	J. Frank Dinnen, Chief Surgeon.
Chicago & Eastern Illinois Ry.	J. G. Frost, Chief Surgeon.
Chicago & North Western Ry.	C. W. Hopkins, Chief Surgeon. W. T. Farley, General Solicitor.
Chicago & Western Indiana R. R.	J. G. Frost, Chief Surgeon.
Chicago, Burlington & Quincy R. R.	D. B. Moss, Chief Medical Officer.
Chicago, Milwaukee, St. Paul & Pacific R. R.	A. R. Metz, Chief Surgeon.
Chicago River & Indiana R. R.	F. E. Pierce, Chief Surgeon.
Chicago, Rock Island & Gulf Ry.	S. C. Plummer, Chief Surgeon.
Chicago, Rock Island & Pacific Ry.	S. C. Plummer, Chief Surgeon. T. L. Hansen, Asst. Chief Surgeon.
Colorado & Southern Ry.	L. H. Wade, Chief Surgeon.
Delaware & Hudson R. R. Corp.	J. W. Ghormley, Company Surgeon.
Denver & Rio Grande Western R. R.	J. F. Roe, Chief Surgeon.
Detroit & Mackinac Ry.	J. M. Jones, Chief Surgeon.
Elgin, Joliet & Eastern Ry.	G. G. Davis, Chief Surgeon.
Erie R. R.	J. Frank Dinnen, Chief Surgeon. J. W. Houk, Asst. to Chief Surgeon.
Georgia R. R.	J. R. Garner, Chief Surgeon. G. A. Traylor, Local Surgeon.
Gulf, Mobile & Northern R. R.	W. N. Blount, Chief Surgeon.
Illinois Central R. R.	G. G. Dowdall, Chief Surgeon.
Indiana Harbor Belt R. R.	F. E. Pierce, Chief Surgeon.
Louisville & Nashville R. R.	Duncan Eve, Jr., District Surgeon.
Manistique & Lake Superior R. R.	A. M. Hume, Chief Surgeon.
Missouri-Kansas-Texas Lines	E. F. Yancey, Medical Director.

Representatives
ne, Chief Surgeon.
r, Chief Surgeon.
olland, Medical and Surgical
olland, Medical and Surgical
ombe, Chief Medical Officer.
d, Medical Assistant.
k, Director, First Aid and
t Prevention.
Dinnen, Chief Surgeon.
t, Chief Surgeon.
pkins, Chief Surgeon.
ricy, General Solicitor.
t, Chief Surgeon.
ss, Chief Medical Officer.

tz, Chief Surgeon.
ree, Chief Surgeon.
mer, Chief Surgeon.
mer, Chief Surgeon.
sen, Asst. Chief Surgeon.
de, Chief Surgeon.
ormley, Company Surgeon.
, Chief Surgeon.
nes, Chief Surgeon.
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Dinnen, Chief Surgeon.
uk, Asst. to Chief Surgeon.
rner, Chief Surgeon.
aylor, Local Surgeon.
Blount, Chief Surgeon.
owdall, Chief Surgeon.
erce, Chief Surgeon.
Eve, Jr., District Surgeon.
Iume, Chief Surgeon.
ancey, Medical Director.

Missouri-Kansas-Texas R. R.	M. W. Colgn, Division Physician.
Missouri Pacific R. R.	O. B. Zeinert, Chief Surgeon.
Nashville, Chattanooga & St. Louis Ry.	Duncan Eve, Jr., Chief Surgeon.
New Orleans Great Northern R. R.	W. N. Blount, Chief Surgeon.
New York Central Lines	W. L. Hartman, Medical Director. F. E. Pierce, Chief Surgeon. S. B. Taylor, Chief Surgeon. Frank V. Whiting, General Claims Attorney.
New York, Chicago & St. Louis R. R.	J. Frank Dinnen, Chief Surgeon.
Norfolk & Western Ry.	D. E. Remsberg, Asst. Supt. and Medical Director. F. J. Collison, Medical Examiner.
Northern Pacific Ry.	A. W. Ide, Chief Surgeon.
Pennsylvania R. R.	Harvey Bartle, Chief Medical Examiner.
Pullman Co.	T. R. Crowder, Director, Dept. Sanitation and Surgery.
Reading Co.	F. S. Ferris, Chief Medical Officer and Examiner.
St. Joseph & Grand Island Ry.	J. R. Nilsson, Chief Surgeon.
St. Louis Southwestern Ry.	G. W. Gale, Jr., Chief Surgeon.
Seaboard Air Line Ry.	J. D. Collins, Chief Surgeon.
Staten Island Rapid Transit Ry.	E. V. Milholland, Medical and Surgical Director.
Union Pacific R. R.	J. R. Nilsson, Chief Surgeon.
Wabash Ry.	F. E. Smith, Chief Surgeon.
Western Maryland Ry.	F. C. Warring, Medical Examiner.
Western Ry. of Alabama	J. R. Garner, Chief Surgeon.

also

American Railway Association	M. J. Cormley, President. J. C. Caviston, Secretary (M. & S. Section). W. E. Hall, Publicity Representative.
Chicago Tribune	W. A. Evans, Health Editor.
City of Chicago	H. N. Bundesen, President, Board of Health.
United States Public Health Service	C. E. Waller, Asst. Surgeon General in Charge of State Relations. J. W. Trask, Medical Director. D. E. Robinson, Medical Director.
University of Chicago (Rush Medical College)	W. E. Post, Professor of Medicine.

(Circular No. M. & S. 147)

American Railway Association

MEDICAL AND SURGICAL SECTION

REPORT OF COMMITTEE ON OCCUPATIONAL DISEASES AND REHABILITATION

Dr. O. B. Zeinert (Chairman), Chief Surgeon, Missouri Pacific Railroad.

Dr. G. W. Cale, Jr., Chief Surgeon, St. Louis Southwestern Railway.

Dr. J. G. Frost, Chief Surgeon, Chicago and Eastern Illinois Railway.

Dr. D. B. Moss, Chief Medical and Surgical Officer, Chicago, Burlington and Quincy Railroad.

Dr. F. E. Smith, Chief Surgeon, Wabash Railway.

Representative of Committee of Direction
Dr. J. R. Garner, Chief Surgeon,
The Western Railway of Alabama and Georgia Railroad.

NEW YORK, N. Y., May 17, 1933.

TO THE MEDICAL AND SURGICAL SECTION:

Your Committee on Occupational Diseases and Rehabilitation has for obvious reasons had but two meetings—one at St. Louis, Mo., December 6, 1932, the other at Chicago, Ill., February 17, 1933. Following the report of the Committee at the annual meeting of the Section in June, 1932, no new topics have been presented for investigation and discussions have therefore been confined to a review and further study of subjects previously brought to your attention.

Syphilis

Of continuing importance is the subject to syphilis, which has been presented in detail in former reports. Again it is desired to impress upon the Section the importance of preventing persons so infected from entering railway service. To accomplish this purpose, more rigid physical examinations must be made; but more important is a blood examination of all applicants for employment, since it is recognized that physical examinations or clinical

signs alone cannot eliminate this class of applicants. Syphilis we shall always have with us in mass employment, and where it is discovered in a person already in the service, in the primary or transmissible stage, that employe should be removed from service and permitted to return to duty only when through proper treatment the danger of transmission to others no longer exists. Known syphilitics in a later stage of the disease should be kept under observation through periodic service examination, and should be required to have treatment whenever clinical signs become manifest indicating that the disease is progressive. Applicants for employment who are discovered to have syphilis should be rejected.

Cardiovascular-Renal Disease

This is a subject of vast importance to railway operation, and has had the attention of the Committee since its organization. There is nothing new which can be added at the present time, but the Committee desires to again emphasize the recommendations which have already been made, namely, that employes in train service, particularly engineers, maintaining a persistent blood pressure in excess of 200 millimeters systolic, or 120 millimeters diastolic, should be removed from service temporarily for observation, and permitted to return to duty only when the blood pressure has receded to a point where it is considered that they are safe. Hypertension is only a symptom, pointing usually to a systemic intoxication—arteriosclerosis or disease of the kidneys. These are diseases which in combination with hypertension secondarily involve the myocardium, or may be the cause of cerebral accidents, such as hemorrhage, thrombosis or embolism.

In studying heart disease, no definite rule can be established whereby a dead-line can be drawn. Each patient must be considered individually. But in general, when there is shortness of breath following ordinary exertion, with marked acceleration of the heart rate after exercise, which does not return to its previous resting rate after two or three minutes, when the blood pressure does not elevate in a normal way after exercise and within a five minute period returns to a point below the previous resting point, when there are arythymias of various sorts intensified by exercise, when the examiner observes signs of inadequate heart function, such as hurried breathing, cough, cyanosis, slight edema of dependent parts, all signs pointing to a pending heart failure, serious consideration should be given to such an individual's fitness to remain in engine, train or switching service. An employe presenting the foregoing symptoms, associated with hypertension, kidney impairments evidenced by an albuminuria, casts, and a reduced PSP less than 35 to 40 per cent in two hours, or an organic heart lesion, particularly a mitral stenosis, or evidence of an aortic lesion, especially when associated with syphilis, should be removed from engine, train or switching service, and should not be returned to duty until there has been a marked improvement. An employe with a fibrillating auricle, a bundle branch block or a heart block is unfit for this class of service. Electrocardiographic studies are valuable in differentiating signs in many of these cases.

Diabetes

Diabetes has been a subject of vast correspondence and investigation by your Committee. There is no new information which can be given to the Section at this time. The consensus of opinion developed through the investigation made by the Committee is that a diabetic is not a hazard in railway employment when the disease can be and is controlled through the observance of proper dietary restrictions, though it must be recognized that the usual chemical urinalysis does not always give an indication of the severity of the disease and consequently a diabetic crisis may develop in a patient who appears to be making satisfactory progress.

A diabetic who requires insulin in the treatment of the disease must be regarded as more than an ordinary hazard for the reason that in using insulin a proper balance must be maintained, otherwise an insulin reaction is apt to develop, leading even to loss of consciousnes. Because of this risk, the Committee has heretofore recommended that an employe who requires insulin should not be permitted to continue in an important or hazardous occupation where his own safety or the safety of others is involved.

Non-Shatterable Spectacles or Goggles

The Committee is gratified at the acceptance by many member lines of its recommendation that employes engaged in eye-hazardous work should be required to wear protective goggles, the lens to be made of non-shatterable glass. It is recommended that whenever such employes require correction, the corrective lens be made of non-breakable glass ground to requirements and fitted into an acceptable spectacle frame, or that goggles be provided which can be worn over the spectacles. Corrective lens cannot be worn in goggles.

At present, your Committee is considering the subject of use of tinted or colored lens by enginemen and trainmen. Considerable data have been amassed on this subject, but it is not felt that our investigation would warrant any special recommendation at this time. Any information that may be supplied the Committee by member Chief Surgeons who have had experience with tinted or colored lens will be appreciated.

Dust as an Industrial Hazard

The subject of dust as an industrial hazard has been presented for consideration by the Commitee. The subject cannot be considered as inherently a railroad problem; however, it may arise in connection with various lines of work, and when it does so, presents a problem which demands attention. At present the best recommendation that can be offered is that dust pathology of the lungs may be prevented by plentiful use of water to wet down the dust at the point of origin, or by forced ventilation to remove the dust particles. In the event that neither of these methods is practicable, respirators should be made available to employes who are required to work in the presence of the dust.

Unconsciousness or Fainting

This is an important subject, which has been investigated by the Committee heretofore. We wish to again call the matter to your attention and re-affirm the recommendations which have already been made to the effect that an employe who is the victim of sudden loss of consciousness is a hazard to himself and the Company in railway service, and should be removed from service permanently, except that on examination some condition is found which caused the loss of consciousness and which may be removed by proper treatment. Sudden loss of consciousness must be regarded as an epileptic seizure until it can be proved to be otherwise.

Tuberculosis

Pulmonary tuberculosis has been considered in former reports of your Committee, but has again been brought up for consideration. While it is not considered that tuberculosis is more prevalent among railway employes than among others of our population, it is the opinion of the Committee that an employe with an active tuberculosis should not be permitted to remain in service, (1) because of the risk to other employes who are compelled to be closely associated with such an employe, and (2) because the effort on the part of such an employe to continue at work interferes with proper treatment and delays recovery. An employe who has had tuberculosis may be permitted to resume work whenever he has so far recovered that there are no clinical signs of an active pulmonary lesion, and sputum is free from tubercle bacilli.

Os Calcis Fracture

This is a matter which was first considered by the Committee and reported to the Section at the annual meeting in June 1932. The importance of this fracture in industry can scarcely be overemphasized, not that the injury in itself is so serious or that treatment presents difficult problems if the anatomy and the mechanics of the fracture are kept in mind. The fracture is usually caused by falling or jumping from an elevation, and may be impacted, comminuted, or a simple fracture with separation. The serious feature, whatever the type of fracture may be, is the permanent disability which will result from faulty reduction and treatment. It is the consensus of opinion of the Committee, based on the information which it has developed, that this is a type of fracture which should be treated by surgeons who have had experience and are especially equipped to handle such cases. It is believed that it is only in this way that prolonged or permanent disability will be avoided.

Rehabilitation

At the annual meeting held in New York in June 1931, the title of the Committee was changed to Committee on Occupational Diseases and Rehabilitation.

The subject of rehabilitation is a broad one and very important, and during the past two years has had the consideration of the Committee, but not enough has been accomplished to warrant the Committee making definite reports to the Section on any of the subject matter at the present time. Certain it is that employes unable to perform the duties of their occupation by reason of injury, illness, or infirmities of age, are deserving of efforts to place them in positions which they are capable of filling efficiently and in safety to themselves and others. To enable employes who sustain injuries to recover with impairments reduced to a minimum, it is frequently necessary for them to have treatment, operative, mechano-therapy, etc., and they should be aided in this restoration so far as it is practical or consistent. The attempt to place handicapped employes in favored positions is difficult because of reduction of forces in all branches of the service in the past three years, as well as because of seniority rules in effect governing employment and replacement of employes. The work of the Committee along this line will be continued, with the hope that when business conditions have improved some definite plans will have been evolved so that very much more may be done in aiding handicapped employes than has been accomplished heretofore.

The work of this Committee is immeasurable, and from time to time new subjects will suggest themselves or be brought to the attention of the Committee. The major topics will constantly receive their consideration, and any additional data or constructive recommendations that may come to the Committee's attention will be presented for the consideration of the Section.

We ask that this be considered as a progress report, and we take this opportunity to thank the member Chief Surgeons for their cooperation in the past.

Respectfully submitted.

COMMITTEE ON OCCUPATIONAL DISEASES AND REHABILITATION,

O. B. ZEINERT, M.D., Chairman.

THE CHAIRMAN: Is there any discussion?

DR. JOHN R. NILSSON (Union Pacific Railroad): About ten days ago when I received the literature covering the reports of these committees, I read it carefully and was particularly interested in this report. On the Union Pacific we have been carrying on these suggestions for several years, and I will just speak on each one briefly.

In regard to syphilis, when we find a man in service who has active lesions, we take him out of service. We don't fire him or retire him, but take him out of service and keep him out until his active lesions are healed, and until he comes back with a negative Wassermann. The company does not assume the expense of this treatment. He has to pay his own doctor bills.

In regard to the cardiovascular-renal class of disease, we have been taking men out of service who have a blood pressure of 200 or over, and I have found and reported recently in regard to the diastolic pressure. In the past two years I have had twelve cases that I have watched very carefully, with a

diastolic of 120 or 130, where the blood pressure was not over 200. These patients were taken out of service, and not one of them was alive six months later. A good many of our doctors do not realize how important this is. Recently I took an engineer off who had a diastolic of 130. I always give a bad prognosis. In these few cases, there isn't one who has lived over six months, where the diastolic has been permanent at 120.

We do not allow diabetics to run engines if they are taking insulin, but I think that depends on the occupation. For instance, if I had a telegraph operator handling trains, who was taking insulin, I would not allow him to continue, but I would not take him out of service, but would put him in as a relay operator. He can't hurt anything by taking messages. The conductor gets them, and the telegrapher doesn't have to go to the trains. The only thing that might happen is that the man might drop over, delaying a train ten minutes or so.

I reported at one of the other meetings in regard to goggles, but I hope that some day the committee will suggest that we use some sort of a tinted lens, not to allow these engineers to go buy a green or blue lens, but suggest some type, and then our management will suggest something to us and they will follow our advice.

Regarding fainting spells and epilepsy, we are not as hard on these cases as this report shows. This committee says they take them out of service. We would not allow them around live tracks or in dangerous surroundings, but we have them in many cases working as clerks, or in positions where it is not dangerous.

All cases diagnosed as epilepsy are not true jacksonian epilepsy. We had a case of one of our young lady stenographers who had attacks diagnosed as epileptic, but after a more complete diagnosis it was found that she had a brain tumor. This has been successfully removed and she is now back in service as a stenographer.

Regarding tuberculosis cases, we take active cases out of service.

Just one word regarding fractures of the os calcis. I think all of these cases should be treated by a surgeon capable of handling fractures. I was interested in Dr. Peck's paper the other day, on the fracture of os calcis, and I notice that he stated in his reports that most of these cases happened in November and December. For years I have noticed that these cases are seasonal. Whenever I see the frost collect on the pumpkins, I know we are going to have fracture of the os calcis, because the tops of the cars are covered with frost, the switchmen do not wear rubbers, and they slip off the top of the car and receive these fractures. I think I had four at one time a year ago last November.

I think the treatment of these cases is very important. A young surgeon with a case of this kind usually puts them up in a cast the first thing. I think that is absolutely wrong. Formerly, as soon as they came into the hospital, if the case occurred in the previous twelve hours, I was in the habit of putting in a Steinman pin, overcoming the contraction of the tendon Achilles muscle. Now I pull them out with a little weight on them, about twelve pounds for forty-eight hours, and put them in a cast. One of our

leading surgeons stated to me a few months ago that he never saw a case of os calcis fracture that wasn't permanently disabled. You have to have better results than that on a railroad. Our cases have fairly good results from early treatment. If a case comes in which the surgeon on the road neglected to send to you in a week or ten days, that is an ancient fracture.

Rehabilitation is an important subject, and on the Union Pacific our management is very anxious to retain the men in service wherever possible, that is, if they are not a hazard to themselves or others. Of course we have a pension system, but a man in middle life doesn't like to be pensioned. He has a wife and a family to keep, and a home he is paying for. We try to put these men back into service.

I have made a list of the permanently injured employees that have returned to service, and I am going to read a few of them to you and show you what their former positions were, what their positions are at the present time, and the rate of pay. Most of you will think if a man is permanently injured his pay in going to be lessened in another occupation.

A car man lost an eye. He was put back to work as a car man, and his value was the same.

A boilermaker lost an eye. He was put back to work as a boilermaker, with the same rate of pay.

A brakeman lost an arm, and we put him in as a clerk. His rate of pay was one-third less.

A switchman lost a limb, and we put him to work as a switch tender, with one-sixth less salary.

A stationary fireman lost an eye. We put him to work as a car inspector, at an increase of 100 per cent in wages.

A car inspector lost an eye, and was put to work as a general car foreman, with an increase in pay of 75 per cent.

I have many such cases. Those disabled by disease are principally high blood pressure and heart disease. I have a telegrapher at the present time with a blood pressure of 120, and I put him in as a relay operator. His position pays him exactly the same.

I had a conductor with high blood pressure, and I put him on a branch line, on the same mileage basis. He is not making as much money because of the shorter run, but he is working at the same rate of pay.

I had an engineer with severe heart disease. We took him out of passenger train service and put him to work as a yard engineer. That reduced his salary about thirty-three and one-third per cent. He isn't complaining about much of anything but this: He is worrying about the time when he is going to be pensioned. He figures that he won't get much pension. The pension is based on one per cent of the pay received for the past ten years, multiplied by the number of years of service.

We always try to put the disabled man back at some position where he can make a living.

DR. E. V. MILHOLLAND (Baltimore and Ohio Railroad): The committee says that no new subjects have been presented for consideration since the

last meeting, but I find we still have the major problems of syphilis, cardiovascular-renal disease, and, to a lesser degree, diabetes. These subjects have been given careful consideration in the past, and the reflection I have at the moment is with reference to arterial hypertension, for instance. Unfortunately, we cannot determine the breaking point of the blood vessels, which Dr. Post made reference to this morning, nor can we determine definitely how long a heart can hold out under an abnormal pressure, and until someone is able to give us some enlightenment of the pathology of essential hypertension, so-called, of course we will continue to grope for enlightenment on that, as we have been doing for some time.

In glancing over the report of this Committee on Occupational Diseases and Rehabilitation, it appears that there are four diseases included in this report, syphilis, cardiovascular-renal disease, diabetes, and tuberculosis, none of which are occupational diseases in the sense of lead poisoning and lung infections from the inhaling of dust and vapors, and conditions of that character, and it seems to me that the present designation of this committee as a Committe on Occupational Diseases and Rehabilitation might be somewhat misleading, and it possibly would have a medical legal bearing in case it went into litigation, because of the fact that this Section of the American Railway Association groups these particular diseases under a report of the Committee on Occupational Diseases.

The committee was originally called the Committee on Occupational Diseases and Hazards. That was changed in June, 1931, to the Committee on Occupational Diseases and Rehabilitation. It might be well to consider a further change in the title of this committee; for instance, to call it a Committee on Occupational Welfare and Rehabilitation, or Committee on Physical Welfare and Rehabilitation, or Committee on Occupational Hazards and Rehabilitation, to get away from that designation of the Committee on Occupational Diseases.

Under these other designations, the committee, of course, could handle all types of conditions of occupational diseases, diseases that render an individual hazardous in his occupation, and protective measures, and things of that kind. I simply leave that as a thought for your reflection.

I should like to add just a few words on the subject of rehabilitation, which we all know is an extremely important matter. The medical departments of all the railroads have, or at least should have, adequate facilities for the complete restoration of an injured employee, when that is possible, or to insure a minimum degree of physical impairment through appropriate surgical care, hospitalization, physiotherapy, and other auxiliary measures. Unfortunately, however, as we well know, in railroad service we are seriously handicapped in so far as opportunities for occupational therapy and rehabilitation are concerned, because virtually all crafts and occupations on the railroad are separately organized with seniority rules applying within each group, and it is practically impossible to assign an employee who becomes physically impaired through accident to some other occupation. Before the war, as you all know, when the railroads were not confronted to such a great extent with this problem, it was possible to place men in other

positions within their own departments, or even to transfer them to other departments. There were such positions as switch tender, turntable operator, toolroom attendant, oilhouse man, pumper, storehouse man, and so forth, that were not incorporated in the seniority agreements. But the situation nowadays is quite different. I know it is on the Baltimore and Ohio, and I assume it is similar on other railroads. All of these occupations are included in the seniority agreements on the railroads, and accordingly there is little opportunity for occupational therapy, rehabilitation, which in many instances are the remedies to be recommended in preference, perhaps, to all others. This is not the fault of the railroad management, but it comes about through the efforts of the organizations to exercise some control over working conditions, and, unfortunately, it works out frequently to the detriment of some of their own members.

As physicians, we certainly realize possibly better than anyone else the importance of occupational therapy and rehabilitation, and it occurs to me that it is up to the managements of the railroads, through a recommendation from this Section to the operating division, to have conferences and negotiations with the brotherhoods and the organizations in the future that further effort be made to present this problem to them in the light that certain occupations should be left out of these agreements, such as those that I have mentioned, switch tenders, toolroom attendants, and so on, in which positions men can be placed who have been disabled, where it is understood they would be placed in these provisions, with the recommendation and approval of the chief surgeon and chief medical officer of the railroad.

THE CHAIRMAN: Dr. Milholland, might I say in connection with the suggested change in the name of the committee, that was briefly considered at the last meeting of the Committee of Direction, and is on the docket for further consideration at the next meeting.

DR. J. R. GARNER: In discussing this paper, I want first to correct an impression that Dr. Nilsson seems to have gained, and which anyone might likely gain by reading the report. That was with reference to taking out of service people who had lost consciousness from any cause unless assigned.

Previous reports of this committee have specifically stated that this had reference to train service, and this particular report seems to be a little indefinite along that line.

It has never been the intent or purpose of the committee, as long as I have been with it, about eleven years now, to say that people who lose consciousness should be restricted from any kind of railroad service. It was meant to restrict them from hazardous occupations only.

As regards the rehabilitation proposition that is before the committee, a study of the situation has brought to the committee just about the same conditions that Dr. Milholland has described to you here, and for that reason the committee has not felt that at this time it could make any recommendations, and the conditions are so different in various parts of the country and with the various contracts, one road making a certain contract and another an entirely different one with the same class of labor, that until some uni-

formity has been developed, by which these contracts can be made the same, and, as Dr. Milholland suggested, eliminate some of these seniority rights, with rights of transferring from one line to another, it is going to be very difficult for the committee to do very much. At the time being, it would seem that in railroad service the rehabilitation practically means bringing the man back to the same class of work that he was doing before he had become injured or ill, as the case might be. But of course we must bear in mind that at some future time it is going to be essential to find occupations, as we try to do now, but frequently we cannot.

I recently had a case of a man who became disabled in service as a conductor. The only place that he could be reassigned to was in the baggage car, but his confreres, his own brothers, will not consent to his taking that class of work, because they are under a different contract, one belonging to the trainmen and the other to the conductors. They won't switch from one order to the other.

Dr. Milholland has mentioned changing the name of this committee, Mr. Chairman, and it has seemed to me that the title is very misleading. In the report which I had the pleasure of reading to you yesterday from a special committee appointed to draw up a synopsis of the work of this organization, mention was made of the fact that we did not consider that there were any real occupational diseases attached to railroad service, and we still feel that way. I feel that this is very essential, not only because of the legal complications that may arise, as Dr. Milholland suggests, but our various brotherhoods may some time get hold of these reports and recommendations and make use of them in a way that it was never intended they should be used, and to the disadvantage, possibly, of themselves as well as the railroads. It has occurred to me that, since we have changed the name so as to omit the hazards, now we might get a better name by making it the Committee on Health and Rehabilitation. By using "health" rather than "occupational diseases," we can cover anything that affects a man's health, be it disease, injury, or any conditions that may develop. There was some question in the last meeting of the Committee of Direction as to whether that would conflict with some of the other committees, for instance, the Committee on Physical Standards, but I do not think so, because the Committee on Physical Standards is setting up standards by which we employ a man or recommend him to be either put into service or kept out. This is a committee to study anything that affects the health and welfare and ability of the employee, and I think the term "Committee on Health and Rehabilitation" would be much more to the point than any that we have had in the past.

If it is in order, I should like to offer a motion, and we can hear the opinions on the motion, that this matter be referred to the Committee of Direction, with a recommendation that it be changed to the Committee on Health and Rehabilitation.

THE CHAIRMAN: It is already on the docket for the next meeting. I hardly think a motion is necessary.

DR. GARNER: That is right.

THE CHAIRMAN: It will be drawn to their attention through the minutes of this convention.

Dr. Post, Dr. Milholland alluded to essential hypertension. Would you like to say what you think about it?

DR. WILBER E. POST: I think, Mr. Chairman, I shall be very brief. I have never used the term, officially. It seems to me that it is a little like acting when angry. You ought to think it over twice, and before making a diagnosis of essential hypertension you ought to examine the patient at least three times and under conditions that will give you plenty of time and facilities for a thorough examination, because it is really a term that is used to apply to those cases of hypertension in which no cause can be assigned.

In practice, it seems to me that it corresponds very closely to that type which I have designated as the hereditary type. I make repeated examinations and reviews of a patient and I find no cause for the damage to the blood vessels. Then I ask what the history of the vascular conditions in the family have been, and I find that there is a rather striking frequency of vascular accidents in the elders, and I ask for sons or daughters or younger brothers or others in the family to be examined, and I find that among them there is frequently a tendency to increased blood pressure at an unseemly age.

Among the members of the profession in general who are not giving special attention to vascular diseases, it has come to be used as an escape for what they don't know. (Laughter and applause.)

DR. F. S. FERRIS (Reading Railway System): I had two embarrassing experiences in ten days. One happened to be a cardiologist in New York, the other a personal friend of mine in Philadelphia. I will mention the second one first, because I was directly interested in that case.

I had a friend, a manufacturer, who played golf about once a week, who carried about $75,000 worth of insurance and had periodical examinations, one about a month ago, and enjoyed fairly good health. I was not his physician, but just his friend. I was called to his hotel one day, where he had had an attack which was diagnosed by the house physician as angina pectoris. They carried him up to bed. He was conscious, and thought he had an attack of acute indigestion. There was a load on his chest. He desired to go home, and with some difficulty we got him there. I did not want to assume the responsibility of the case, and I suggested a very prominent physician in Philadelphia, a professor of medicine of a university, also a personal friend, to look after the case. The patient gave a history of some chills. As a matter of routine the physician took the temperature from time to time, and felt his pulse, and said the man had a low tension, and proceeded to take the blood pressure. I watched the proceedings. The mercury ran up to 220, and he let the air out, and when it got to 140 the man gave a few gasps and passed out of the picture.

A few days prior to that my associate, who happened to be in New York, had a similar experience. It was a coincidence. A man walked into the doctor's office and said he felt tired, had a pain around the heart, had a little

attack. The doctor immediately proceeded to feel his pulse and take the tension. The same thing happened, much to the embarrassment of the doctor, as in the other instance.

Taking the blood pressure didn't cause the man to pass out, but it was an embarrassing position for me and the professor. I don't know what happened. I mention these as a warning. Dr. Post may be able to tell us more about it. I thought I would mention it because I also had an experience on a golf course, close to my home, where, in the last year, there have been three cases in which members fell over dead on the golf course, all of them carrying big insurance, all of them having health examinations, one of them a personal friend of mine.

I bring up this very important contribution for your consideration, because some of us have an unfortunate experience at some time, and Dr. Post might like to speak a little bit about a wise procedure, where you have a very low pressure and put a sphygomanometer on, and it might cause a bad situation.

THE CHAIRMAN: Thank you, Dr. Ferris. Is there any more discussion?

DR. L. H. WADE (Colorado & Southern Railway): Dr. Nilsson mentioned a thing that I believe is very important in the blood pressure readings or examinations. My understanding of the blood pressure mechanism is this, that the diastolic reading is the constant pressure reading, always. Your systolic pressure reading is an intermittent affair. Therefore, I lay more stress on the diastolic reading than I do on the systolic. I am not so much concerned about the systolic reading as I am about the diastolic. I believe any man or woman with a diastolic pressure of 110 and above is in a serious condition. I don't think I have had any patients die six months after having a 110 diastolic reading, but many have become incapacitated, and I should like to have Dr. Post, if he will, give us some enlightenment on this procedure, whether it is wrong or right. I believe it is right. I believe we should use that as a key to the index to the patient's condition.

Regarding the os calcis fracture, I believe it would be well to examine the spines of thse injured people at the same time you are examining the heel, especially if they have fallen several feet, because very often we find fractures of the spine that are overlooked and found many months later.

THE CHAIRMAN: Gentlemen, this is a very interesting discussion. I think it opens up so much that we had better leave it until after Dr. Evans' paper. Will Dr. Plummer please introduce Dr. Evans?

DR. S. C. PLUMMER (Chicago, Rock Island & Pacific Railway): I think, to this audience perhaps, the most appropriate introduction of Dr. Evans would be similar to the one given to the President of the United States, which consists of five words, "The President of the United States." I might say, "Dr. Evans." But I do want to say something about him. He is introduced now. I want to tell you how much he has cooperated with us, with this Section and the railroad surgery profession generally, because Dr. Evans really has a special interest in the problems affecting the health and

welfare of railway employees. He is always ready to cooperate with us in Chicago whenever we ask him, and gives an abundance of his time. He has helped out the different system associations when they had had their meetings here, and has helped the Association of Railway Surgeons when they have met here, and a few years ago when the question of law in the Illinois State Legislature providing for a first aid packet on trains was under consideration, Dr. Evans spent half a day of his time with a committee representing the railroads here, before the Illinois Commerce Commission, as a result of which we had the Illinois Commerce Commission endorse standard first aid packets of the American Railway Association. That was a very great service on the part of Dr. Evans. I also wish to call attention to the fact that, with reference to this splendid report which Dr. Garner read yesterday, we are indebted to Dr. Evans for several hours of his time where he sat in with the committee and made very valuable and constructive suggestions. Dr. W. A. Evans, the Health Editor of the Chicago Tribune.

DR. W. A. EVANS (Health Editor, Chicago Tribune): I thank Dr. Plummer for his flattering and kind introduction of me to you. I hope that he is right in thinking that I have been of some service in helping railroads to a solution of an occasional health problem.

In spite of my appreciation of Dr. Plummer's introduction of me to you, I wish that in place thereof he had introduced you to me. For, as I have listened to your discussions this morning I have the feeling that I have not properly diagnosed you and your thirst for information. You are an organization which devotes its attention, in the main, to standardization of methods. Your duties make your interests lie largely in the standardization of methods of relief, and care of the injured and the sick.

What I have prepared to be offered to you relates to prevention. No attention is given in this paper to standardization of method. The nearest that I can come to that is to ask you to regard it as a consideration of objectives. It develops the philosophy of public relations in matters of health protection and promotion.

The best that I can ask of it for you is that you consider it as a proposal out of which may come standardization of objectives.

My theme is "Railroads and Preventive Medicine." The subject announced carries the implication that railroads are, in some respects at least, an arm of government. The implication can be accepted as correct, provided we use the words "arm of government" in a certain sense.

The basis of a complicated society is production, on the one hand, and consumption on the other. The struggle between nations, communities, and individuals, in a competitive society developed enough to merit the name, is a struggle for markets. Production, consumption, and markets imply such secondary agencies as money and other mediums of exchange, and railroads and other machinery of transportation. So important are these secondary agents that we think of them as fundamentals.

The law of the land so recognizes transportation facilities. To provide for their construction a broad, legal principle was designed. It is called the

by the company, is ample. What is more, the requirements for an acceptable drinking water supply for trains has operated to cause improvement in local water supplies in hundreds of communities. Safe water for track crews, bridge crews, and construction crews has proved difficult from the standpoint of both the railroad and the government. It cannot be said to be perfect yet, but it is superior to that of other people working in the same vicinities on other than railroad work. This has operated not only to protect the railroad employees, but also to educate those with whom they are in contact.

That the railroads are under some legal and moral obligation to safeguard the health of their patrons can be assumed. The volume of traffic is so great that the number of yearly exposures exceeds the population. There are about 135,000,000 people in the United States and Canada. The number of passengers hauled per year exceeds that figure. Therefore, the total number of yearly exposures to the health hazards of railroads exceeds the total population. I know of no evidence that any of these millions contract any disease as a result of this exposure. This is partly due to the briefness of the exposure, but it is also due in part to the protection which is offered.

A pure water supply is not the only measure of safeguarding passengers. Cars are screened against mosquitos and flies. Cars, and especially sleeping-cars, are freed of bedbugs. Sanitation of toilet rooms, wash rooms, towels, and drinking cups is superior to that which prevails in many of the boarding houses, hotels and homes out of which passengers come. Railroads are leading in the effort to secure conditioned air for occupied places. They make more effort to protect their passengers by proper heating in winter and proper chilling in summer, and by ventilation at all seasons, than is made by the boarding houses, hotels, and homes into which the passengers pass. The food supplied passengers on railroads also conforms to sanitary standards.

The interacting responsibilities of the railroads and their employees are both legal and moral. A recognition of this relationship has become a part of our thinking. The railroads go to more trouble to protect their employees than they do to protect their passengers, which is as it should be. The exposures are continuing, lasting for years, and the relations are more intimate. Some illustrations of what railroads do for their employees by way of improving their health are: securing water of standard purity for their use on trains and in all places of employment, even extending to somewhat successful efforts to get approved water for track crews; protecting employees against mosquitoes and flies by screening; periodic health examinations, starting with tests of vision for acuity and color blindness, and of hearing for quality, and extending to various heights above this but always to a plane above that provided for the general level of the population. The average school child does not get health promotion through periodic physical examination superior to that given the railroad employee.

When periodic physical examination, with instruction in how to live, given in classes and otherwise, has become the prevailing method in medicine, and the history of the movement is being written, and it will be recorded that some of the pioneer work in that line was done among railroad employees under the guidance of railroad medical and health departments.

Every form of vaccinal prevention, the value of which has been determined, is in use among railroad employees. The Pullman Company has made vaccination against smallpox a condition of employment for porters and dining-car employees, and this measure has protected the employees, the company, and their patrons. There is some discussion of periodic tests for venereal disease among railroad employees, and this proposal will receive more serious consideration when there are better tests than those now available for determining the infectivity of those diseases.

Railroads have been leaders in providing hospital and ambulatory service for their employees under benefit plans, and in some circumstances this extends to the families of employees.

Summarizing, it can be asserted without successful contradiction that no other large group of industrial workers enjoys health protection and health service in the same measure as do the average railroad employees.

Industries recognize that advantage of taking good care of their clients. This service sometimes runs considerably beyond the limits of simple buying and selling; in some fields it runs as far as health protection for those clients at times. No industry has recognized its obligations to promote the health of its clients in a broader way than have the railroads, and very few have equaled them. Most industries recognize the advantage of taking good care of their employees; this service often runs into the field of health care. In this field few industries can compare with the railroad industry. These are fields in which the position of industry in general is defined and accepted.

In addition, railroads have been of service in still another field. That is, in health service to communities not necessarily clients of the road nor employees thereof, the general population. Examples of what is meant are: the anti malarial community sanitation measures carried out by the Cotton Belt Route; the measures of the same kind, having the same objective, by the Illinois Central Railroad; the drainage of some low land at Centralia, Illinois, by the Illinois Central Railroad in cooperation with the local Chamber of Commerce and other organizations. I am sure that most of the railroad chief surgeons in this audience could supply more than one illustration of the same type of community health service.

Another instance of community service, one that is altruistic even though it is frankly commercial, is the refrigerator car service especially for meats, milk, fruit and vegetables. Under it people everywhere can have fresh foods at all seasons of the year. People who need fresh milk, but who must live where it cannot be produced, can get what they need when they need it. The same applies to the anti-scorbutic fruits and vegetables. That the surplus can be carried from the season of plenty into the lean one, and from the place of supply to the place of demand, is an economic matter. But it has a health side, in that it promotes the general health.

Again summarizing, we find the railroad industry to be a worthy helper of health departments, and in a sense and to a degree an arm of the state in its work of health conservation. The railroads function thus for their patrons, for their employees, and to an unusual extent for the general public.

DR. HARTMAN: I move that we extend a rising vote of thanks to Dr. Evans for this most excellent address that he has given.

. . . The audience arose and applauded. . . .

THE CHAIRMAN: With your permission, gentlemen, we will now resume the discussion of the report on occupational diseases and rehabilitation. I think Dr. Wade asked Dr. Post a question, and Dr. Post has been kind enough to remain in order to reply to it.

DR. POST: There is no question but there is a danger in taking blood pressure under conditions cited by Dr. Ferris. I do take blood pressure under some of those conditions, but when there is distinct indication of a dilatation of the heart, I do not. I think Dr. Sippy was the first to call attention to the danger in these cases in taking blood pressure, when I was a student, and he emphasized it especially in cases of recent cerebral hemorrhage and recent cerebral thrombosis. What the mechanism of that danger is, I do not know. I can picture, however, that in taking the blood pressure, constriction is made on the veins, while the arterial supply continues into the extremity, and there accumulates a fairly large reservoir of blood, which is released as you relieve the pressure, and that may throw some more constriction, but that ought not to be enough. Still, in the old days when we used to bleed, and we had the constriction on the arterial pressure not yet overcome, the veins were filled and we would prick a hole in the superficial distended vein, the blood would spurt out so far, it would gradually die down, and just the squeezing of the fist would squirt it up sometimes for six or eight feet. That means that one may perhaps accumulate quite an extra amount of blood in those veins, and I caution my internes that if they do take pressure under these conditions, they shall pump up the pressure rapidly, and when they relieve it relieve it, and not put it down and up and down and up, and vacillate to find the exact point, but get the point the first time it comes down, put it up, and until you have overcome the arterial tension, and do it promptly, and then let it out and get your figures on the one operation. I think that is one way of avoiding it.

The constriction of the arm is very unpleasant to some people, and may stir an emotional effect of spasm in those vessels. For that reason I think it is considerably more dangerous in angina than it is in coronary thrombosis, unless that coronary thrombosis has led to an extensive impairment, with extensive damage to the myocardium, so that it is dilated.

Diastolic pressure is important. We have all learned it by experience. I am not able in my own mind to fix a certain diastolic pressure that is dangerous. One day I arrived at the hospital and the interne was waiting at the door, and he hurried me into the examining room, because there was a doctor there in severe pain. He had driven in from down-state that morning. He was having a terrible attack of angina, and his blood pressure was 265, with a diastolic of about 135. We gave him a course of nitroglycerine. He didn't have any in his pocket, and he came there as the first place to come. In a few minutes he felt well, and his blood pressure dropped down to 170, later to 160, some time later to 150, but his diastolic had dropped

down too, so that he had the normal ratio of the pulse pressure to the diastolic, and really that is what counts in carrying on the efficiency of the circulation. He would get these attacks, and we were to chart his pressure, through his cooperation, during the attacks. In other words, he had an expansive type of high blood pressure, and after a rest of a number of weeks he settled down to a fairly uniform blood pressure, with a good relationship between the pulse pressure and the diastolic, so that his circulation was efficient, and he could go on with his work and carried it on for some time.

Strange to say, another doctor in the same town had the same type of angina pains later. I don't know what there is about their water down there, but it was that same spastic type.

THE CHAIRMAN: Thank you again, Dr. Post. Are there any more remarks, gentlemen? Dr. Zeinert, is there anything you would like to reply to?

DR. ZEINERT: No.

THE CHAIRMAN: That discussion is closed. Next on the program is a report of the Committee on the Extension of the Use of Standard First-Aid Packets, which Dr. Crowder will present.

. . . Dr. T. R. Crowder, The Pullman Company, read the report of the Committee on the Extension of the Use of Standard First-Aid Packets. . . .

DR. T. R. CROWDER: Last year your Committe on Extension of the Use of Standard First-Aid Packets reported that no developments of importance had transpired since the previous annual meeting; that there had been no legislation on the subject of first-aid equipment for trains and no regulations or orders had been issued by public service commissions or other bodies having jurisdiction; nor had there been, so far as known, any extension of the use of the standard packets by the roads.

We can but repeat these statements now. There has been no activity in this field. No inquiries have come to us and the committee has held no meetings. Such work as it has done has been by means of correspondence.

The status of first-aid requirements is fully set forth in detail in previous reports, with all errors corrected in the last one. Only two states have officially approved the standard packet by the action of their public service commissions. These are Illinois and Massachusetts. In five other states there have been laws requiring some different or additional equipment, but none of them are difficult to comply with. It is not believed that it would be good policy to attempt to have these laws changed.

Your committee's negative activity is small warrant for its continuance. It is not apparent that there will presently be more work for it to do. It has been seriously suggested that it ought to be abolished. It has been suggested also that in spite of there being no call for present activity the committee should be retained for the meeting of any emergency that may arise—legislative, regulatory, or otherwise. Now that the packet has been perfected and approved by the Section and has stood the test of practical use, that all chief surgeons are familiar with it and understand the desirability of its

general adoption, it may perhaps be more practical to leave the meeting of emergencies to those locally interested and most likely to be earliest informed. The committee is, however, at your service, and its disposal for you to decide.

DR. G. G. DOWDALL: With reference to the report of this Committee, you will all recall that in the beginning there was a very considerable amount of work which was necessary in order to reconcile the varying differences in the different states, and through the activity of this committee I think we have accomplished very definite results, particularly in the states mentioned by Dr. Crowder. We have always the possibility of something being brought up in the various territories with reference to introducing new ideas or new equipment with reference to first aid, and it would seem to me that this committee as it now stands, without being necessary for it to continue a very active life, is an advantage as a committee, in effect, which will be available when the occasion presents itself that any of the chief surgeons might require assistance or advice in regard to handling the situation that might develop locally, so it seems it might be advisable to continue the committee, which is without expense and which does carry out the idea of trying to continue to carry out the standard of first aid equipment in the various communities.

THE CHAIRMAN: Gentlemen, at various meetings of the Committee of Direction this committee has been discussed, and it has always been the feeling of the Committee of Direction that the very excellent work which they have done is clearly shown. They are always standing on guard; they are always stopping other people from interfering with railroad first aid packets. I don't think the committee should be discontinued. What is the thought of the meeting?

The next item is the report of the Committee on Fractures, by Dr. Plummer.

DR. S. C. PLUMMER: I was hoping to make a record for having a brief report, but I am afraid Dr. Crowder beat me to it.

. . . Dr. Plummer then read the report of the Committee on Fractures. . . .