

# MINE FOREMANSHIP

QUALITIES WHICH EFFECT LEADERSHIP

by

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A SERIES OF LECTURES

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# John J. Rutledge

## A biography



**I**N 1922, the state of Maryland established the office of chief engineer for its Bureau of Mines. The establishing of this office—a commendable step in industrial progress of the state—was a matter of routine. The next problem confronting the state was to find the man to fit the task. Obviously, this task called for a man of wide experience, thorough technical knowledge, and exceptional organization ability. In October of that year, Governor Ritchie appointed Dr. J. J. Rutledge to the office

and the intervening years have witnessed signal progress in the operation of the Bureau under its first and present incumbent.

Dr. Rutledge brought to the office not merely the technical education of his schooling at the University of Illinois, where he received the degree of B. S. in mining engineering and at Johns Hopkins, where he secured his Ph. D. in geology, but also a wealth of practical experience extending back to the year 1895 when he was mine manager of the Spaulding Coal Company at Spaulding, Illinois.

Indeed, Dr. Rutledge is a man born to his work; for both his father, Walton Rutledge, and his grandfather, William Rutledge, were interested in the industry in their old home back in County Durham, England. At the age of 19, Dr. Rutledge's father came to the United States and ultimately became secretary of the Miners Benevolent Association for the states of Illinois, Indiana, and Missouri. It was during this time (March 10, 1870) that John J. was born. During his father's activity with the Miners Association and subsequent activity in promoting legislation providing for

the inspection of mines and later as state mine inspector, Dr. J. J. Rutledge gained a proper background for his present work.

During his career, Dr. Rutledge seems to have run the complete gamut of experience, and crowded more than a lifetime of accomplishments into his 33 years of activity as a practical mine expert in both coal and metal mines, as a mining correspondent, a geologist, consulting engineer, as president of the Coal Mining Institute of America, and treasurer of the Mine Inspectors Institute of America.

While Dr. Rutledge was studying at the University of Illinois, he spent his vacations in mine surveying and after graduation served as assistant mine manager for the Consolidated Coal Company in Mine No. 6, at Staunton, Illinois. Then followed two years as mine manager for the Spaulding Coal Company, after which he spent a year traveling in the coal fields for the *Engineering and Mining Journal*. By this time, the young Mr. Rutledge was beginning to find the great and inspired joy of his work and the subsequent years brought rapid strides in progress and accomplishments. For three years longer he remained in the field as mine manager of the Litchfield Mining and Power Company, and superintendent of the Wabash Coal Company of Dawson, Illinois. In the year of 1900 he turned again to the halls of science, this time at Johns Hopkins University of Baltimore, taking a post graduate study in geology, where he received the degree of Ph. D. During his summer vacations at Hopkins he continued his field work as assistant geologist and mining engineer on Maryland's Geological Survey.

After graduating at Johns Hopkins University, he engaged in practice as a consulting engineer and geologist, traveling in the metal mining regions of the United States, Canada, and Mexico until April of 1909. During this period he operated pyrite mines in Massachusetts, Canada, and Virginia, and zinc mines in Arkansas. In April, 1909, the Technological Branch of the U. S. Geological Survey brought him back to the coal industry, where for four years he was engaged in fighting mine fires, investigating the use of permissible explosives in coal mines and other cooperative work with the U. S. Geological Survey and the Mining Department of the University of Illinois. From 1913 until 1922 he served successively as district mine engineer for the southwestern district of the U. S. Bureau of Mines at McAlester, Oklahoma, with supervision of mining operations on the coal and asphalt lands of the Choctaw and Chickasaw nations, and superintendent first of the St. Louis, and then the Urbana stations.

Such is the career of the man selected by the state of Maryland as its first chief mining engineer of the Bureau of Mines. Since his appointment to the office, Dr. Rutledge has continued to contribute not merely from his wealth of previous knowledge and extended experience, but also has inaugurated and sponsored innumerable mining methods which have greatly increased the efficiency and safety of the mining industry. He is an outstanding executive who combines his extensive experience with unusual resourcefulness to meet modern conditions and solve the problems encountered by the mining industry, is friendly to all in the industry, and serves as a capable advisor to those who seek knowledge regarding their work.

# Personal attributes

## Lecture No. 1

**I**T MAY SEEM to the reader presumptuous on the part of the writer to attempt to give advice and instruction to coal mine foremen, superintendents, and other mine officials, regarding the personal qualities that they should possess in order to be successful in their chosen calling. The writer of this article pleads in self-defense that he possesses mine foreman certificates of competency from two different coal producing states and has served as mine foreman and superintendent of coal mines and as engineer and superintendent of metal mines. Moreover, he was for some years, while in the service of the United States Bureau of Mines, as mining engineer, in daily contact with numerous mine foremen in different parts of the country. During the past six years he has been head of a State Department of Mines and has supervised the instruction in night mining classes and a Summer Short Course for Coal Mine Employees; he has, while in this work, been brought intimately in contact with mine foremen, assistant mine foremen, fire bosses, superintendents and with mine labor of all classes, and knows something about the difficulties under which these men work, and the qualities which the employer demands of them. In addition, for six years, the writer has been acting as Chairman of the State Mine Examining Board of Maryland, and during this time several hundred mine employes have passed under his observation while undergoing the ordeals of examinations, both written and oral, and the results of the information thus gained are embodied in this introductory article and in the articles that will follow from month to month.



### Handling mine labor

**THE WRITER** is fully convinced that in times past he would have been spared much humiliation and anguish of mind as the result of the many mistakes he made in trying to operate coal and metal mines, if he had had the good fortune to have had access to such articles as will subsequently appear in this series. In the writer's judgment, one of the mistakes which mining schools are making

at present, is the turning out as graduates in mining engineering young men, many of whom will, in all probability, be called on to fill executive positions in and about coal mines and metal mines without having had any previous instruction as to how to handle mine labor. Unless this want is supplied by our mining schools within the next decade, the mine foremen, mining captains and superintendents of the future will have to be supplied from the vocational classes taught in night schools or in short course schools. Our educational system, including the grade, high school, and university, must prepare to bridge the present gap between education as now conducted, and industry, or stand aside for true vocational training.

### **Certain attributes necessary**

DURING the school year 1928-1929, two night classes in coal mine management have been conducted at Barton and Frostburg, Allegany County, Maryland, by L. C. Hutson, vocational mining instructor, who has, for the past five years, been conducting Night Mining Classes and Summer Short Courses, in the Western Maryland coal field, under an informal cooperative agreement between the University of Maryland, the County Boards of Education of Allegany and Garrett Counties, Maryland, and the Maryland Bureau of Mines. Mr. Hutson has had an important part in the choice of the subjects and has not only instructed the classes but has led the discussions which followed each lesson, and he deserves much of the credit for the character and success of the work.

To the writer's mind, there is no more important subject of study for the ambitious coal mining employe than mine management, or coal mine operation, or whatever other name we may choose to call that topic which treats of those qualities of human nature which the mine foreman or superintendent must possess in order to be successful in his work. Such a study is, in the nature of things, cooperative, and criticisms, suggestions, and comments are earnestly solicited from the readers of these articles.

### **Positive character**

THE FIRST REQUISITE for a successful mine foreman or superintendent is that he shall be of a positive character; that is, he must possess such nature that those with whom he comes in contact, and especially those over whom he is to exercise authority, will know that he means what he says, and that he will be able to express his opinions and orders concisely, plainly, and positively. This characteristic is probably the most essential and fundamental for a mine foreman. Many mine foremen and superintendents are

failures because they are *negative* characters instead of *positive*; that is, they do not know their own minds and they cannot, therefore, express their minds to their subordinates, and as a result the subordinates do not have any confidence in either their judgment or in their generalship. As a rule this sort of a mine foreman's or superintendent's superiors have a very poor opinion of him.

### Decision

THE next characteristic is that of decision. A successful mine foreman or superintendent should be able to arrive at a definite conclusion very soon after a matter is put up to him and after he makes his decision in a matter he should abide by it. A great many mine foremen and superintendents are failures because of indecision. They do not decide quickly just what is to be done, and even after they do decide the proper measure to take they delay in putting these measures into execution and thus not only weaken and destroy the value of their own work but also that of their subordinates, their associates, and their superiors. Decision is one of the most valuable characteristics of a successful mine foreman.

### Initiative

THIS QUALITY is highly desirable in an executive, especially in the smaller mines where it is necessary to economize on account of the limited personnel in such mines and the restricted amount of mine supplies and equipment. Usually the mine foreman or superintendent of a small mine develops initiative and has this trait well developed before he gets to be a mine foreman or superintendent, since it has been necessary to possess this qualification to have risen to a position of authority.

### Leadership

LEADERSHIP OR GENERALSHIP—that is, the ability to lead or direct the work of others, is another qualification without which it is impossible to become a successful mine foreman or superintendent. As a rule those mine employes who develop into successful mine foremen or superintendents have manifested leadership or generalship when they were miners or mine employes, and this has attracted the management to them and has resulted in their promotion to foremen or superintendents.

### Discretion

THIS is probably one of the most valuable traits which a mine foreman should possess. Especially is this the quality necessary for the mine foreman in regions where labor and mining conditions are difficult and where the ability to keep quiet and use the head in getting out of difficulties is very essential. Rarely is a successful mine foreman found without the quality of discretion.

## Aggressiveness



SOME AUTHORITIES would place aggressiveness as the second qualification, ranking it next to positive character as an essential for a successful mine foreman or superintendent, and they have excellent grounds for so placing the subject. No one can be considered to be a successful mine foreman unless he has some measure of aggressiveness and usually the successful mine foreman or superintendent is measured by the amount of aggressiveness that he possesses.

Under adverse mining conditions and onerous labor requirements foremen often develop aggressiveness, though sometimes the necessity of working under strong labor influences seems to dwarf and destroy the aggressiveness of many mine foremen and superintendents.

## Self-confidence

THIS is a quality absolutely necessary for mine foremen and superintendents. If a mine foreman or superintendent has not the requisite experience or technical training it will not be possible for him to have much self-confidence, and self-confidence in a mine foreman or superintendent is just as necessary as it is in the case of the orator. Neither the mine employees nor higher mine officials have any faith or proper regard for the mine foreman who has no self-confidence and no foreman develops to any sort of a position about a mine if he lacks self-confidence.

## Poise

MANY MEN have become successful in business and professional life largely because they possess poise, or the faculty of never losing their heads and keeping cool in all the varying situations that arise in and about a coal mine during ordinary daily operations. All successful foremen and superintendents possess poise and it is rather remarkable that all successful generals in armies also possess poise.

## **Dignity**

PROBABLY more mine foremen and superintendents fail in this respect than in any other. The old-time mine foreman was dignity itself, especially if he were Scotch, Welsh, English, or Irish nationality; such men have risen to be mine foremen and superintendents by hard struggles and they fully appreciate the importance and dignity of their hard-won office. The lack of proper dignity has been responsible for the failure of most young men as mine foremen and superintendents.

## **Resourcefulness**

THIS is a quality which a mine foreman will develop in time if he remains in a position of responsibility in or about a coal mine, and unless he does develop this trait he will not last long as a mine foreman or superintendent. The ability to meet situations as they arise and to cope with them successfully is known as resourcefulness and those men who possess it in the largest degree are those who receive the highest compensation as mine foremen and superintendents.

## **Integrity, honesty, and dependability**

IT IS IMPRACTICABLE to separate these three qualifications and therefore they are listed together as among the essential traits for a successful mine foreman. A mine foreman must be honest and he must have integrity and he must also have dependability; that is, his word must be his bond and this we express by saying he is honest; then he must uniformly conduct himself in an upright manner and be true to all his obligations and we call this integrity; then he must be dependable, i. e., he must at all times be looking after the work for which he is paid and must promptly meet the demands made upon him and we express this by the word dependability.

## **Adaptability**

UNLESS a mine foreman or superintendent can adapt himself to the varying conditions in his mine, whether it be the ability to get along with the mine employes or with the officials of the coal company, or the faculty of meeting the varying conditions that hourly arise in the operation of the mine and to adapt himself so to these conditions as to operate the mine efficiently and economically and safely, at the same time getting along with the mine employes with as little friction as possible, he will not make a successful mine foreman or superintendent.

### **Cooperativeness**

THIS is an essential qualification for successful mine foremen or superintendents. No one can work successfully in a mine organization unless he has the ability to cooperate with the other mine employes, as well as his superior officials about the mine; in fact, mining is so arranged that unless miners, mine officials, and mine operators cooperate, there is no efficiency or economy in operating the mine.

### **Discipline.**

THE PERSONNEL of a coal mine must have absolute discipline and it is impossible to operate a mine safely, efficiently, or economically without proper mine discipline. Especially is the exercise of discipline necessary in order to secure safety of life and limb in and about a mine.

### **Conscientiousness**

UNLESS a mine foreman or superintendent is conscientious in his relations and feelings toward mine employes, as well as the mine management, he will not be a success. Especially is this true of the thousand and one promises which mine foremen and superintendents make to other employes and to their superiors. Unless the foreman or superintendent is sincere in making these promises and in carrying them out, he will fail. He should be just as conscientious about the fulfillment of his promises or agreements made with the mine employes, especially with the miners, as he is with promises made to the officials of the company.

### **Ability to organize**

UNLESS A FOREMAN has this ability he will never be a success, even a half-way success as a mine foreman, or will not be able to operate a mine successfully. It is necessary to have the working force well organized so that each employe knows his proper place and duties and fulfills them and the whole organization is functioning at all times.

### **Judgment**

THIS QUALITY has been left to the last because it is a faculty which the mine foreman or superintendent develops with age and with experience. It is a quality which the majority of young mine foremen and superintendents lack most. Judgment should be written in capital letters for it is probably the most valuable trait mine foremen have and that for which the coal company is most willing to pay.

# Positive character

## Lecture No. 2

**T**HE DICTIONARY defines positive character as "free from doubt or hesitation; confident; assured; decided; certain."

Perhaps the first requisite of a successful mine foreman or superintendent is that he shall be of positive character; that is, he must possess such a nature that those with whom he comes in contact, and especially those over whom he is to exercise authority, will know that he means what he says and why he says it, and that he is able to express his opinion and orders concisely, clearly, and positively. Men of positive character are nearly always leaders and good leaders usually make good mine foremen.



It was true in the early days of coal mining and is true today that those mine employes of strongest character naturally became elevated to positions of authority and responsibility.

Mine employes, of all men, demand that those who give them their orders shall know their own minds and, furthermore, know how to so express their orders to inspire confidence in the minds of those to whom their orders are given. If there is any doubt in the minds of the employes as to the capability of the one who gives them their orders, then the employes are sure to execute the orders in a half-hearted manner or fail to do so entirely. A man who is not sure of himself cannot inspire confidence in others.

### **Confidence in oneself is essential**

EVERY SUCCESSFUL GENERAL in an army has been a positive character and not a negative one. Such men were always sure of themselves and therefore they always inspired confidence in their officers and soldiers. In like manner no mine foreman has ever inspired confidence in his mine employes unless he has had confidence in himself. As one mining man recently remarked, "A man cannot get his men to be what he is not." Probably that President of the United States during the last thirty years of whom history will have the most to say will be Theodore Roosevelt, who was positive in character.

The average man, especially the mine employe, respects a man of positive character; for, as he will tell you, he "always knows where to find him," by which statement he means that the answer the positive-minded man gives to his question is always clear, definite, and easily understood and permits no equivocation or doubt.

As opposed to a *positive character* or nature is a *negative character* or nature. A negative character never says yes decisively in word or action; no one knows what to expect from him except doubt or nothingness; as mine employes express it, "they never know where to find him."

A weak-minded man cannot set his mind on one problem and solve it at once, before proceeding to take up another question. He is easily swayed by the advice and suggestions of those self-seeking persons about him, intent on the accomplishment of their own purposes and having no concern as to the welfare of the one to whom they are presenting the suggestions. In the end the weak-minded man finds himself in the position of the father and son and the donkey in Aesop's Fable. They accepted and acted on every suggestion offered them and eventually lost their donkey.

The two teachers most positive in character, in the writer's college days, were a cavalry officer who taught military science and a distinguished civil engineer who taught mechanics. So forcefully did these two men impart their instruction that today, after a lapse of over thirty-five years, the manual of arms as taught in Casey's Tactics can be executed letter-perfect and the principles of mechanics can be applied as well as in the school days.

The possession of strength or positiveness of character is demonstrated in the countenance by high or prominent cheek-bones, a protruding and well-developed nose, firm or heavy jaws, and eyes that look out boldly from the face. Any successful mine foreman or superintendent can read character from the face of an applicant for employment.

### Lack of force endangers other qualities

A MAN may be intelligent, be of the strictest integrity, familiar with every detail of mine management, and yet fail to be a successful mine foreman or superintendent because he lacks sufficient strength of character to be competent to control mine employes.

Many mine employes have more than sufficient technical knowledge necessary to operate a coal mine successfully and economically and also have the necessary practical experience

essential to mine operation, yet they lack sufficient positiveness of character necessary for the successful mine foreman or superintendent. When some emergency arises they have not sufficient strength of character to meet it and consequently they make an ignominious failure and soon step down and out of the position. An accident may cause them to lose their nerve; a reprimand from



a superior official, more often than not deserved, may make them discouraged and disheartened, or contact with an over-exacting mine committee may cause them to lose their morale. If the mine foreman or superintendent is a positive character he will meet all these difficulties and trials successfully and will become stronger in character through having encountered such difficulties. Men of positive character often seem to thrive under such troubles as have above been enumerated.

#### Can be developed

IT IS POSSIBLE, fortunately, to develop the quality of positiveness by careful cultivation of this trait in those who lack it. It undoubtedly is true that "leaders are born, not made," yet by careful and long-continued practice, one can develop a certain amount of this important attribute of a successful mine foreman.

But positiveness of character need not be evidenced by brusqueness or incivility on the part of the mine foreman. Several of the most successful mine foremen that the writer has met were gentlemen in every sense of the word and yet they were positive in character.

One of the greatest faults of the average mine foreman is his failure to realize and appreciate the responsibility imposed upon him by the mine employes, the operator and by the general public. One of the chief reasons for this condition is that most of the foremen have not served the apprenticeship that they should have served before being employed as mine foremen. Many foremen have suddenly stepped into this position of authority without any previous training as assistant mine foremen, or fire bosses, and the result is almost always disastrous. Another reason is the way in which they are certified by the various State Mining Examining Boards. In some states the examination is not as strict as it should be and the candidates do not have to exert themselves greatly to pass the examinations and hence do not place great value on the possession of the certificates.



A third point is the title. In every state except Illinois, the man in direct charge of underground workings is called a mine foreman and in many instances there is a superintendent over the mine foreman. In Illinois the man in charge of the mine is known as "mine manager" and with the exception of the mine examiner, who corresponds to the fire boss in other states, the mine manager is in absolute and complete charge of the mine workings and the mine law

recognizes no other person than the mine manager. He is captain of the ship and it would be well if other states adopted a somewhat similar plan. The captain of a vessel and the conductor of a railroad train wear a uniform and in some states railroad conductors also are endowed with police powers in addition to those given them by the railroad. The writer has always thought that if mine foremen were similarly clothed the results would be beneficial.

Superintendents, general managers, and presidents of coal companies should realize that their attitude toward the mine foreman determines largely the type of mine foreman the man will be. They have a large and important part in the development of the character of their foremen and superintendents. In their attitude toward the mine foremen they are either making or breaking them.

## Decision

### Lecture No. 3

**T**HE NEXT IMPORTANT QUALIFICATION of a successful mine foreman or superintendent is *Decision*. The Standard Dictionary defines decision as "*the quality of being positive and firm in one's practical judgments or in one's actions; the disposition to prompt and steadfast action; quickness and vigor of resolution, as—He acts with decision.*"

"Synonyms: *Decisive; admitting of no question; unmistakable; unquestionable.*"

This attribute of a successful mine foreman or superintendent logically follows that of *Positive Character*; in fact, the two characteristics so dovetail into each other that it is impossible to mention one without the other. The mine foreman or superintendent should be able to arrive at a definite conclusion very soon after a matter is put up to him for action, and having made a decision in a matter he should stand by it and not depart from it. Decision is one of the most essential qualifications of a successful foreman or superintendent. Many a mine official has lost out for lack of decision in his character and has been displaced by men of far less intelligence and experience, *but who did possess decision*. Some Northern generals in the Civil War lacked decision and this prolonged the conflict. In several instances these generals failed to take advantage of conditions in their favor after they had won important battles and because they failed to follow up their advantages it became necessary to fight other battles.

### **Necessary for commercial success**

SOME YEARS AGO the writer was the engineer for a company that was the creation of a single man, its president. This company, developed in a period of about thirty years, became country-wide in its activities and still is, several years after the death of its founder. This man possessed the trait of decision to a marked degree, in fact that was the main factor in his and the company's success. The nature of the business conducted by the company was such that decisions as to procedure had constantly to be made a few minutes after the matter had been brought to the president's attention. It was his practice to call all the heads of his various departments into conference and to lay the matter before them for their consideration and then to ask for suggestions as to the course to be followed. After all this had been done the president made his decision as to the action to be taken and, once made, he stood by his decision through thick and thin. Sometimes he made mistakes, but in ninety percent of the cases in which he made decisions he was right. But the point is that he did not delay; he acted promptly. Nothing is more disconcerting to the officials of an organization than indecision on the part of the person at the head of the organization.

All the officials of miners' organizations, all the successful mining officials, with whom the writer is acquainted, have been men of decisive character.

### **Indecision a drawback to advancement**

TO MENTION *decision* is also to mention *indecision* by which we mean doubt or irresolution, or hesitation. No man who is indeci-

sive can become a successful mine foreman or superintendent; in fact, many mine foremen and superintendents are failures because of indecision. They do not decide quickly just what is to be done and even after they do decide the proper action to take, they delay putting the decision into action. They lessen, by their actions, the confidence of their subordinates and utterly destroy the confidence of their superiors. As an old miner would put it, "they do not know their own minds," and the pitiful part of indecision is that the poor victim of the trait invariably finds it harder to act the longer he defers decision and action.

Decision and indecision become stronger and more fixed habits with the exercise of these traits.

## Initiative

### Lecture No. 4

**I**NITIATIVE—The dictionary defines initiative as "the power of initiating"; "ability to originate or start," specifically, "the aptitude to develop or undertake new enterprises." Another authority defines initiative as "to take the first step"; "taking lead"; "acting before someone else does"; "acting without a lead from some other person."

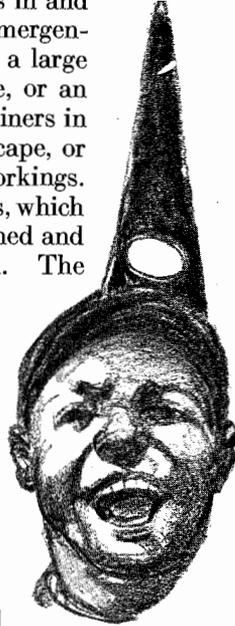
Those persons who have strength of character usually possess initiative; in fact, these two traits of human nature are generally found in the same person. The man of strong character is usually a man of action; that is, he has initiative.

The leaders in all great movements—moral, political, or scientific—have all possessed initiative and have dared to suggest new and radical ideas in the face of ridicule and opposition.

#### **Foreman must show initiative**

PERHAPS IN NO OTHER INDUSTRY is initiative more an essential qualification of a successful foreman or superintendent than in mining, because mining operations are conducted beneath the surface of the earth, wholly by artificial light, and under conditions that are extremely adverse as compared with similar operations on the surface of the earth and open to the sunlight. Under these circumstances, situations are constantly arising which require immediate and decisive action. This means that the man in charge of the employes, property, and equipment must possess the personal attributes which will enable him to meet the situation and take proper action.

Especially is this true of safety conditions in and about mines, particularly coal mines. An emergency arises, such as the sudden discovery of a large body of standing gas in an open-light mine, or an extensive and heavy fall of roof, shutting miners in their working places and preventing their escape, or a sudden inrush of water into the mine workings. One of these or many other mine catastrophes, which may occur at any time, even in the best designed and safest operated mines, require prompt action. The man in charge must act on his own initiative, since he is generally alone in the mine workings when the accidents occur and far from his superior mine officials with whom he would usually consult before taking any action. Since he is alone, however, he must assume responsibility, his own responsibility, and take such immediate action as his judgment tells him is proper.



### **Initiative can be cultivated**

AS A RULE, INITIATIVE, like leadership, is inherited and its presence in an individual is usually apparent very early in his life; however, the trait can be cultivated and developed if the person lacking it is willing to make the trial. The French coal miner, who led a number of his comrades out in safety, days after the Courriere's mine explosion, exhibited initiative as did the leaders of the men at Cherry, Ill.; McCurtain, Okla.; Briceville, Tenn.; and Minden, W. Va., who directed the miners to barricade themselves in after the explosions thus avoiding the suffocating afterdamp and ultimately escaping in safety.

It required the exercise of initiative on the part of some one member of these various groups of frightened mine employes to make the first efforts to stop the panic, to persuade the men to erect the barricades, and to remain behind the barricades until it was safe to come out.

One of the first requisites of a leader is the power of initiative or the ability to *start* something.

### **Can't be a success without initiative**

NO PERSON NEEDS this ability more than the average coal mine foreman or superintendent, because, in the very nature of the case,

conditions surrounding coal mining may change at any moment as to require immediate decision and action on the part of those in authority to avoid loss of life or of property, and unless the foreman or superintendent has the ability to act quickly and wisely, he will not be a successful foreman or superintendent.

Practically no man is a success as a mine foreman unless he possesses initiative.

Those who do possess initiative are always leaders for they are usually the first to act or to speak on any subject and hence attract followers.

### "Push" also vital

"PUSH"—a quality of human nature expressed by the slang term "Push" is strongly akin to initiative and should be included in any discussion of initiative since usually those who possess one of these traits also have the other.

One authority defines "Push" as a colloquialism meaning "energy," "spiritness," "enterprise," "aggressiveness."

"Push," as the writer understands the meaning of the word, is the quality of constantly seeking to advance the interests of one's self, or of the man, or concern, for which one is working—of constantly using every possible means of advancing one's work.

## Generalship, leadership, and management

### Lecture No. 5

**T**HE SUBJECT OF LEADERSHIP is associated with generalship or management, and these three subjects will be treated in this chapter.

A common expression is, "He displayed good generalship." By this is meant the person referred to displayed good judgment or exhibited wisdom in handling matters, especially in an emergency. A synonym of generalship is strategy. This word "generalship" defines a characteristic which every successful mine foreman or superintendent possesses to a greater or less degree. The word is derived from a military title, a general being the one and chief officer in charge of several regiments of soldiers.

The word originally referred to the good leadership or management exhibited by the chief officer in charge of an army, especially during a battle. The chief officer in charge of an army during a battle is usually surrounded by his staff officers and stationed at some strategic point from which he observes the progress of the battle and issues proper orders to his officers. The general is in constant communication with his officers with whom he holds regular council. The general is assumed to have his plan of battle prepared, and his officers are expected to have a part in preparing it. Also they must be ready to carry out any orders necessary to put the plan into execution.

A mine foreman is in a somewhat analogous position.

A good mine foreman or superintendent should have perfected such an organization that his plans will be carried out as soon as the orders are issued.

### **A good baseball manager must have generalship**

THE SKILL THE MANAGER of a major league baseball team exhibits in handling his team to best possible advantage, so that he gets the cooperation of every member of the team and at the same time makes money for the company owning the team, is called good generalship. A successful mine foreman follows somewhat the same plan.

By the term "good generalship" is meant using the head or brain to save wear and tear on the feet and hands of the mine foreman as well as worry of his mind. Any mine foreman can use the brain that nature has given him in making his work more efficient. A mine foreman, in order to develop good generalship, should have the various details of the mine management assigned to certain capable mine employes and should expect them to carry out the work promptly and properly. If he has his forces well organized, then his mind will be free to look after the larger details of the mine management, and he will be better able to develop good generalship than he would if he had not coordinated the various details of the mine management and assigned the various duties to certain employes. Most mine foremen do not exert enough generalship; especially is this true of the foremen of many small mines.

A mine foreman or superintendent, in addition to possessing initiative, must have the capacity for leadership.



As a rule, leaders are *born* and not *made*; that is, the qualities of initiative and leadership are in the child when born and increase as the child grows into youth and manhood. However, many miners and a few men of technical training have been so trained as to become successful leaders. One of the most successful leaders in metal mines that I ever knew, and who now is in charge of a prospecting party in the sub-Arctics in Canada, was a D. S. O. of the Boer War in South Africa, who some years later came to the

Cobalt Camp in Ontario and proved to be one of the most successful handlers of miners in that famous camp. This man was under forty years of age, was of splendid physique, and of fine personality; that is, he had that indefinable something that made the miners like him as well as respect him. They would cheerfully do almost anything for him.

### Must lead self first

A CELEBRATED ACTRESS recently said, referring to the ability to act, that one either has it or he has not, and while this statement is true to a large degree, yet the ability of leadership can be developed in one, if he is willing to be trained by those who know how; this was proved by the great number of leaders who came to the front as a result of the training that they received during the World War.

But no man can lead others unless he can lead himself; that is, he must have complete mastery of himself, of his temper, of his tongue, of his appetites, and of his whole body. If he cannot control himself he most assuredly cannot control or lead others.

Often a miner or mine employe has excellent judgment; is an experienced, all round miner and timberman; and is, moreover, intelligent and has had technical training to a limited degree, but he is a failure as a mine foreman or superintendent because when he is placed in the responsible position of mine foreman or superintendent he does not exhibit the qualities of initiative or of leadership. The company is forced in self-defense to get rid of him and

perhaps employ in his place a mine employe who has less experience, intelligence, judgment, and training, but who does have to a greater degree the qualities of initiative and leadership. Much of the success in America is the result of good leadership.

## Discretion

### Lecture No. 6

**DISCRETION**—*the ability and tendency to choose or act with prudence; instinctive perception of what is wise or proper united with caution; the habit of wise judgment; sagacity, especially in relation to one's own conduct.*

**P**ROBABLY NO TRAIT OF CHARACTER makes a mine foreman more valuable than the possession of discretion, because a foreman who is discreet rarely makes mistakes and never has to apologize for hasty or angry words, and he never allows himself to be in a dangerous hurry or to fall into a fit of temper. Moreover, this trait very rarely is found in a mine foreman, but, when it is discovered, it is highly appreciated by the mine employes and by the mine foreman's superiors.

This trait of discretion can be acquired if the mine foreman is willing to take the necessary pains to cultivate it. Men who have the power of discretion are usually deliberate in thought, and they are always rather slow in action. Always they think about what they are going to say before they say it, and usually they are considering the possible result of their actions before they act. Of course, there are mine foremen who are *naturally* discreet, but they are very rare, and they inherited this characteristic; all others must acquire this virtue. But those who do become discreet never lack for employment at the best of wages.

#### Study mistakes of self

ONE OF THE WAYS to acquire discretion is to study the mistakes of one's self and of others, and to profit by them. This is one of the reasons why many timbermen, trackmen, boss-drivers, fire bosses, and other classes of mine employes finally have become successful mine foremen. They were coming continually into contact with mine foremen and carrying out their orders, and they profited by their mistakes. Men in such subordinate mine positions have excellent opportunities for developing the quality of discretion.

# Aggressiveness

## Lecture No. 7

*AGGRESSIVENESS—disposed to work actively in behalf of one's interests.*

**A**GGRESSIVENESS is a characteristic that most mine foremen, especially in years gone by, have developed to a very great degree before attaining the position of mine foreman. Because they had to fight hard in order to advance, they developed the trait of aggressiveness. Especially was this the case when a mine foreman or superintendent was not required to have any technical training, but had to possess the ability to handle mine employes so as to get the maximum amount of work out of them. Such a man was always an aggressive character.

A mine foreman or superintendent who has charge of a mine, the employes of which are members of the miners' organization, usually has the trait of aggressiveness strongly developed; but he has also developed the traits of discretion and good judgment, which temper the aggressiveness.

In an open shop mine, particularly in isolated regions, the mine foreman or superintendent must be aggressive if he is to be successful. If he is to be a success, he must drive good bargains in his negotiations with his employes regarding tonnage and day wages, rates, yardage, and the many other items in the cost of a ton of coal.

### **Meet emergencies with aggressiveness**

EMERGENCIES ARISE, and the foreman or superintendent must be able to meet promptly such conditions and take immediate action. The emergency may be a sudden, dangerous condition that arises in the course of the operation of the mine, such as the unexpected discovery of a large body of standing gas in the workings of a coal mine that is in operation. It may be a sudden strike of mine employes that demands immediate and decisive action, if it is not to be permitted to spread and become a general strike. All these demand aggressiveness on the part of the mine foreman or superintendent.

A man rarely gets very far in politics unless he has some aggressiveness, and likewise one seldom attains the position of mine foreman or superintendent unless he has some aggressiveness.

As a rule, children are born with this trait and little boys generally manifest it in their first school days. It has been a matter of observation that many of the successful mine foremen and superintendents of the present day, and those of thirty years ago, came up from the occupation of trapper, mule-driver, or slate-picker and suffered hard knocks in their early days in and about the mines. This made them competent to fight for advancement and a recognition of their rights, and developed in them aggressiveness. Perhaps this is the most essential qualification of a good mine foreman or fire boss.



### **Aggressiveness essential to management**

CORRESPONDENCE SCHOOL LESSONS, night mining classes, and summer short courses in coal mining may give a mine employe a certain amount of technical training and the knowledge that will enable him to pass the examination for mine foreman or fire boss, but unless the coal mine employe has some aggressiveness he will never develop into an efficient mine foreman. As a mine employe recently remarked, "You can't run a coal mine successfully and leave your brains at home." Many men of wide experience in all departments of coal mine operation, of good judgment, and possessing intelligence, strong in character, faithful and industrious, fail as mine foremen for the reason that they lack aggressiveness.

A successful baseball or football captain must have aggressiveness, so also must a successful commercial traveler or the general of an army.

## Self-confidence

### Lecture No. 8

**S**ELF-CONFIDENCE or self-assurance is defined as the "Quality or state of being confident of one's own strength or powers."

Self-confidence has been defined by a practical man as "Keeping your head up."

All great military and naval officers have possessed self-confidence. General U. S. Grant is reputed to have once said, "I propose to fight it out on this line if it takes all summer." He was confident that the course he had outlined would eventually bring him victory, and it did. All good orators must possess self-confidence. An orator who does not have self-possession or self-confidence makes a sorry spectacle on the platform. All great athletes have self-confidence, as have all great politicians, and it is doubtful if there was ever a successful labor leader who did not have self-confidence. Such men must have self-confidence in order to inspire their followers with confidence and their ability to win the object for which they are striving.

Physicians and surgeons must have self-confidence. How did they gain self-confidence? By training and by experience. First they had theoretical training; then they had actual experience derived from work on patients in the hospitals.

Self-confidence is an essential qualification for a mine foreman or superintendent. If he does not *know* that he has the ability and experience necessary to operate a mine efficiently and economically he will be a failure. If he has no confidence in himself he will not inspire confidence in the mine employes or in his superintendent.

### **Man must be master of self**

No BOY OR MAN can drive even a mine mule, or horse, or pony, unless he has self-confidence. If he does not have confidence in himself, the mule, horse, or pony will soon learn that he does not have it. Then, so far as the driver is concerned, he is getting money under false pretenses when he applies for his money on the mine pay-day.

How can a mine employe, mine foreman, or assistant mine foreman acquire self-confidence? By experience and training. By actually doing the things that a mine employe, especially the working miner, must do daily.

Any intelligent mine employe, whether he is a miner, driver, timberman, tracklayer, motorman, or laborer, can observe the manner in which his mine is being operated and can observe the success or failure of the mine management and can, by studying the matter carefully, widen his experience and profit by the success or failure of those in charge of the mine. When, and if, such employe is given charge of some detail of the operation of a mine, the knowledge gained by previously observing the actions of the officials in charge of the mine will be of immediate service to him. When he is assigned to certain duties in a mine he will have a definite idea as to just what to do and he will do it with ease.

The main cause of failure in mine operation is that those in charge of the operation either *do not know what to do*, or they *delay in doing what they do know to be the right thing to do*. If one has the knowledge of what is the proper action or course to pursue, self-confidence is developed and the battle is then half won.

Confidence in one's self inspires confidence in others, and they are willing to cooperate with you in anything that you undertake; but, if you have no confidence in yourself you cannot inspire confidence in others.

The poet Dryden said, "For they can conquer who believe they can." Another writer, Boiste, wrote, "He who has lost confidence can lose nothing more." Milton said, "Confidence imparts a wonderful inspiration to its possessor."

## Poise

### Lecture No. 9

**T**HE DICTIONARY defines poise as the "state or quality of being balanced; equilibrium; equipoise; equanimity; rest." We say a person has poise when we mean that he "keeps his head" at all times and under all conditions; is not ruffled by unexpected or unanticipated situations; and remains calm and unexcited no matter what happens. A man who has poise is a rarity and is invariably successful, regardless of his profession or calling, because his mind is constantly at work determining the proper and best course to take. As a rule, a person with poise comes into the world with it. However, the trait may be cultivated by those who have naturally but a very small degree of poise; a certain amount of poise may be developed in any person. A small child, especially a little girl, often demonstrates poise to a remarkable degree, and such a child can be placed before strangers without becoming embarrassed. Of course, the ordinary child is frightened when brought into the presence of strangers, but, now and then, a child is found who does possess real poise, who does not become alarmed easily, and whose mind works calmly and logically at all times.

#### Worry is enemy of poise

A PERSON who has poise saves energy. Poise prevents waste of energy. One who has poise has self-control. Self-consciousness is an enemy to poise. Worry counteracts poise. Anger destroys poise, and hinders the proper action of the mind. The develop-



ment of poise will destroy nervousness. Nervousness shows a lack of poise. Nervousness is not only damaging but it saps vital energy. To have poise, a man must be free from worry.

Nervousness is the opposite quality of poise.

Poise is not *pose*. Poise impresses the beholder. Posing antagonizes the beholder. Poise gives confidence in the possessor.

Posing does not inspire confidence. When we say a person has poise we mean that the body and mind are under control, and when he lacks poise we mean the reverse.

Giving way to a single fit of anger or passion not only causes a lack of poise but may undo the work of years.

When one is excited or "keyed-up" he does not have poise.

### Poise necessary for leadership

POISE IS A VERY ESSENTIAL qualification for any person who is to direct the activities of any body of men, and especially coal miners. A mine foreman or superintendent must not permit himself to become excited or embarrassed at any time; for when in a state of excitement or worry, his mind is not functioning properly. Of all men, the mine foreman or superintendent needs a cool head; and sound, sober judgment and poise will surely be developed by slow and calm consideration of the thousand and one situations that daily arise in our coal mines.

A mine foreman's mind never functions most efficiently when he is excited and it ceases to function entirely when he gets angry; therefore, the mine foreman or superintendent should cultivate poise, if it is not already developed in him. One is very apt to say certain things when angry or excited. This is deeply regretted afterward, but the words are gone beyond recall and the speaker must take his medicine.

## Dignity

### Lecture No. 10

**D**EFINITION OF DIGNITY: Nobleness of manner; aspect or style. Synonyms: decorum, propriety of manner or conduct; seemliness; fitness.

There is probably no trait of character, the lack of which so rapidly undermines the influence and efficiency of a young mine foreman as dignity. Especially is this true of engineers, clerks, office men, or young technical graduates who have been made foremen and superintendents and who have had very little or no practical experience as miners or mine employes and none whatever in handling mine labor, before assuming the position of assistant foreman or superintendent. The old-time miners who become mine foremen are usually men of dignity and poise. By the time they have reached the position of foreman or superintendent they realize that the position is one of dignity and importance and that if they are to fill it creditably and successfully, they must habitually deport themselves in a dignified manner. Such men will almost invariably be found to exhibit the quality of dignity.

### **Respect begins at home**

UNLESS THE MINE FOREMAN or superintendent has self-respect and dignity, he is not at all apt to inspire respect and confidence on the part of the mine employes over whom he may have been placed in a position of authority; especially will this be true of the older employes. If the mine foreman does not respect himself, and such self-respect is invariably manifested by a dignified deportment, he cannot expect other people to respect him. Moreover, he cannot secure efficiency and economy and maintain proper discipline unless he has the respect of all the mine employes.

Such manifestation of proper dignity should not extend so far as to be classed as aloofness, standoffishness, or a haughty demeanor; for nothing is more fatal to the usefulness of a mine foreman or superintendent than such an attitude, but there should be just enough dignity to prevent the development of too great familiarity on the part of the employes. The old saying "familiarity breeds contempt" is especially true in the case of coal mine foremen and superintendents. There is a middle ground, or a "golden mean," and the wise foreman or superintendent will soon find it and make it his rule of practice. Wise fathers develop such an attitude toward their sons who have reached the age of adolescence.

### **Don't be too familiar**

RECENTLY AN OLD EMPLOYEE of one of the larger coal mining companies was discussing the qualifications of the mine foreman at the mine where he worked. This employe had been at the same mine for many years, and in that period a good many mine foremen had come under his observation. "Tom Burns," said he, "is a good mine foreman but there is one thing he lacks. He makes a mistake in being too familiar with his men. He gathers a bunch

of men around him, some of them his relations both by blood or marriage, and they take advantage of him."

A mine foreman should say "good-morning" to each employe when he meets him in the morning. He should speak courteously to all employes, but he should not be too familiar with them and especially he should not accompany them on hunting trips and other like excursions, which bring on a familiarity that compromises him later in his dealings with them.

Many of the troubles of a young mine foreman or superintendent are due to his lack of dignity and sometimes such men so far forget themselves as to play pranks on miners or mine employes, and this lack of dignity lessens the regard in which they are all held by the mine employes, and sooner or later ruins their usefulness as mine foremen. It is almost as essential to have proper dignity manifested by coal mine foremen and superintendents as it is to have this trait exhibited by officers in the army.

## Resourcefulness

### Lecture No. 11

**T**HE DICTIONARY DEFINES the word "resourceful" as: (1) fertile in resources or expedients, skilled in methods of efficiency; (2) full of resources, possessing abundant means.

To put the definition in ordinary coal mining language, to be resourceful is to possess the ability to meet every situation that arises in the daily operation of a coal mine, and to cope successfully with every difficulty that may arise. This is one of the essential requisites of a successful mine foreman or superintendent. For example, a large fall of roof may suddenly occur on a main haulageway—fortunately without injury to any person or to the mine equipment; and it is absolutely necessary that the mine foreman or superintendent, or their assistants, act wisely and at once to so arrange the operation of the mine that the fall will cause the least possible curtailment of the output of the mine. The mine foreman may be able to re-route the haulage motors into another haulageway while the fall on the main haulageway is being removed, and in this way the regular daily output of the mine is maintained.

#### **Resourcefulness shown in many ways**

A MINER may have suffered a severe accident while at work at the coal face, and after he has received first-aid treatment it is

essential that he be removed from the mine workings and transported to the hospital as rapidly and as carefully as possible. Unless the mine foreman is resourceful in arranging promptly for the care and transportation of the injured miner, there will be delay and the injured man may die of shock or loss of blood before he has been removed from the mine workings and placed under a physician's care.



Probably in no department of coal mine operation is resourcefulness more valuable than in the method of mining, especially the work at the coal face. The method of mining that is being followed may prove to be a failure, and it will be necessary for the foreman to suggest and try a different method of mining.

All successful generals in war have been men who were resourceful, who had the ability to conceive and carry out successfully new lines of attack when the old ones had failed.

### **Every successful man is resourceful**

THE ORATOR MUST be successful in employing the best arguments to accomplish his purpose. The actor must also be resourceful to meet the changing moods of his audience.

In like manner, a successful mine foreman or superintendent must have the ability to conceive and execute new methods of doing things when the old methods are not applicable.

Probably no quality in a mine foreman or superintendent pays better dividends in promotion and increased salary than resourcefulness. The foreman or superintendent, who knows how to meet successfully each little labor trouble which arises at the mine and to settle it at once, is sure to be in demand. Such troubles are always potential mine strikes, and they cause trouble if they are not settled at once. Or perhaps it is the breakdown of machinery or equipment which must be met, and the resourceful foreman or superintendent will successfully contend with such situations. A resourceful mine foreman or superintendent never knows when he is whipped, and, as a rule, he is never long out of a job; for jobs are always hunting resourceful men.

Of course, resourcefulness by itself, however desirable, must be tempered with other attributes for successful leadership. In fact, it is the combination of these qualities which determines the adaptability of a miner, or any other man, for various positions. However, one thing is certain: if a man is resourceful, it indicates an active brain, a willingness to work, and consequently such a man is a very desirable employe.

## Integrity, honesty, and dependability

### Lecture No. 12

**T**HERE ARE three words which describe attributes that are applicable to any discussion of the chief traits of character which the successful mine foreman or superintendent should possess. These are "integrity," which is defined as moral soundness, uprightness, rectitude; "honesty," which is defined as freedom from guile or fraud, the quality or state of being honest, incorruptible; and "dependable," which is defined as being trustworthy, trusty, reliable.

Members of the Maryland coal mining class will recall that one of the recent speakers before the class, a prominent operating coal mining man, stressed honesty as one of the chief attributes of the successful mine foreman. A successful mine foreman *must* be an honest man; he must have integrity and he must be dependable. It is difficult to separate these three words in describing the characteristics of the successful mine foreman. Probably no attributes of the mine foreman are more closely scrutinized than these traits.

#### Dishonesty causes friction

**I**F MINE EMPLOYEES, and especially miners, get the idea that the mine foreman or superintendent is not treating them honestly, is not giving them all that they should get for their day's work, or is not crediting them with the proper amount of coal mined, then there is sure to be trouble and friction. As a rule, such troubles become worse as time goes on, because miners, especially, discuss these matters among themselves when they get out of the mine, and the foreman or superintendent who is the object of such criticism soon loses his prestige.

Sometimes a mine foreman who is strongly pressed for a reduction in costs thinks that by omitting certain items from his cost sheet or from his labor reports he can cut a few cents from his total cost per ton, trusting that he can later make up for the omission; but, like the bank cashier who borrows from the bank, such a mine foreman is bound to have to pay the cost ultimately.



The best plan is to have a certain definite scale for tonnage, day work, and dead work, and to adhere absolutely to this scale and make no departure in the slightest degree from the terms of such scale. A dishonest, undependable mine foreman or superintendent is bad for the coal company and worse for the employes.

In recent years many of the best managed coal mining companies have instituted the system of issuing statements one or two weeks in advance of pay-day and each employe, by reading his statement, sees exactly the amount of money coming to him on pay-day. He signs this statement and presents it on pay-day when he goes to the window for his pay envelope. After the mine employe signs the statement, the mine officials, especially the paymaster, will pay no attention whatever to any of his complaints, since the employe has already certified as to the correctness of such statement. This plan of issuing statements has resulted in a very great reduction, in fact a practical elimination, of disputes at the pay window on pay-day, and has developed a more business-like method of handling such matters at the mine.

One coal mining company engaged in sinking a shaft practiced hanging a labor sheet at the top of the shaft each day, and every sinker, as he came off shift, saw his shift entered on this sheet at the top of the shaft and there was no chance for dispute at the end of the pay period.

## Adaptability

### Lecture No. 13

**T**HE DICTIONARY defines "adaptable" as "capable of being adapted," "adjusting to new conditions." There is probably no trait of character more essential to a successful mine foreman



than adaptability. Especially is this quality necessary if the foreman is to go into a new position or into a new company, or his mine is merged with a large combination; for he will then be placed with other men, strangers, who are engaged in his own line of work and it will be necessary for him to adapt himself to their ways of doing things and their ways of thinking and of talking.

The principal fault found in mine foremen of mature years is their lack of adaptability in meeting new conditions in the mine—to new labor conditions. New appliances, new methods of working, new kinds of machinery—all of these are coming up in the mechanization of coal mines which is now under way. The older mine foreman will have a very hard row to hoe unless he has some measure of adaptability. Such a mine foreman makes himself, as well as his superiors and subordinates, miserable and usually, unless he can change his ways, winds up by the loss of his position. This happens to many men of the widest experience and of the greatest value to their companies, but who are unable to adapt themselves to new circumstances.

There is a good deal to be gained by getting the other fellow's point of view. He looks at things in a different way than you; he has had different experience in various lines; he has a different mind from your mind and his mind works in a different way, so it is of the greatest advantage to get his point of view. One always can learn something from any other person with whom he comes in contact. The actual amount of knowledge thus acquired may be very small, or it may be information as to how *not* to do things instead of how to *do* them; but you get some knowledge from everyone with whom you come in contact, especially with other mine foremen and superintendents.

The man who is adaptable is usually a good mixer and such men are always in demand. They are "all things to all men." Especially in the larger coal mines do employes have to work with other people and therefore they must adapt themselves to the other people's methods or ways to a certain extent. A mine foreman should be adaptable to suggestions from above or from below; that is, from those above him in authority and those below him in authority. The miner, track-layer, timberman, driver, motor-

man, and brakeman who are daily and hourly performing a certain work know more about the details of such work than a foreman or superintendent, and the foreman should be adaptable to suggestions of the right sort made by these employes. Good foremen will be considerate of others' opinions and ways of doing things.

There is another angle of this matter which should be taken into consideration. The adaptable person has many friends. He is welcome wherever he goes and no matter in what company he goes. A good salesman must be adaptable and mine foremen must also be adaptable

## Judgment

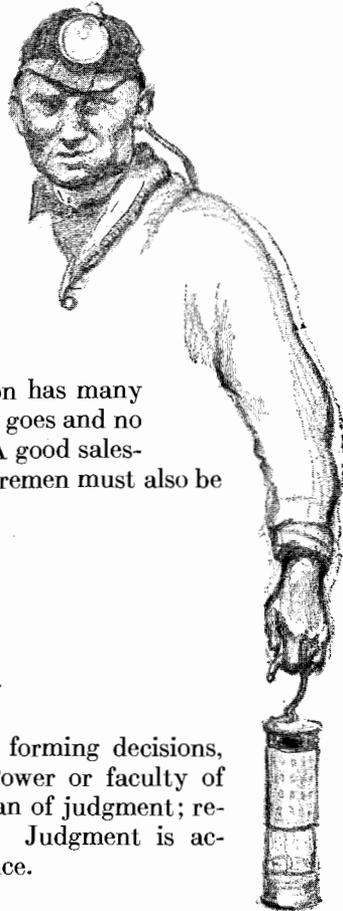
### Lecture No. 14

**J**UDGMENT: Power or faculty of forming decisions, especially correct decisions. Power or faculty of judging wisely; good sense, as, a man of judgment; result of judging; opinion, decision. Judgment is acquired only as the result of experience.

Synonyms: Prudence, wisdom. Prudence may be briefly defined as good judgment or foresight.

We say a man has good judgment, and we may mean that he has good ideas.

Judgment is probably that attribute for which the employer is most willing to pay the highest price. If the foreman or superintendent lacks judgment then the coal company by which he is employed is sure to pay for his lack of this quality. Judgment is acquired only as a result of experience and, as a rule, comes only with maturity. When a mine employe, especially a miner, has worked a long time at such work as digging coal, laying track or setting timbers, he has a certain knowledge gained by experience which enables him to exercise judgment in determining the cost





of such work and the length of time it would take a man of ordinary ability to perform this work. Probably in no department of mining is judgment more important than in determining the amount of time required to perform certain work in coal mines; and if the judgment in such matters is bad, then the cost is greater than it should be.

Judgment is the quality of mind that the majority of mine foremen and superintendents most lack, and of which men of mature years usually possess a considerable amount. Judgment can be developed by the exercise of it.

Perhaps judgment is more essential in the handling of coal mine labor than in any other department of mine management and it can be developed only by a close study and observation of the manner in which successful mine foremen and superintendents handle their mine employees.

In many instances of railroad accidents, and in not a few mine disasters, the verdict of the coroner's jury has been that the man in charge of the railroad train or in charge of the mine failed to exercise good judgment, or he made an error in judgment.

The reason for many coal mine disasters would be "poor judgment" on the part of the mine foreman or superintendent if the question as to the cause of the disaster were asked of a jury composed of mine foremen and superintendents. Lack of good judgment in handling mine labor on the part of a mine foreman or superintendent will cause more labor trouble in a coal mine than any other fault in the mine foreman or superintendent. In some cases—in fact, in most cases—the verdict of the jury would probably be "lack of good judgment," but in some other cases the verdict might be "the lack of any judgment whatever" on the part of the foreman or superintendent.

*Proverb of the Twelfth Century:*

*"If Youth but knew and Age were able,  
Then Poverty would be a fable."*

# Discipline

## Lecture No. 15

**D**ISCIPLINE: Subjection to rule; control; habit of obedience. Probably no training is more important than that of discipline in the child, in the youth, and in the young man. A child who grows up without being subjected to the proper parental discipline is a nuisance to everyone he meets in years afterwards and is a misery to himself, because he has not been trained properly. He had not been subjected to proper parental and home discipline during his childhood.

If there were no discipline in the Army there would be no battles won and an army would be a disorganized mob. Moreover, it would be impossible to feed such an army. If there were no discipline on railroads, railroad travel would be exceedingly dangerous, in fact impossible. There is too little discipline on our highways at present, but if there were none at all exercised by the state, county, and city authorities, travel on the highways would be vastly more dangerous than it is at present.

In the safe operation of coal mines, it is necessary that discipline be exercised; in fact, the Maryland Bureau of Mines has taken for its motto for the year 1930, "The Three Essentials in Preventing Mine Accidents—Education, Supervision, Discipline," and discipline is properly placed last in that the first two qualities will be of no value unless the last—discipline—is exercised.

A little reflection will convince every mine employe, whether he is a miner working at the face, a driver, a motorman, a timberman, a trackman, a fire boss, an assistant foreman or foreman, that mine discipline is essential to safe and efficient coal mine operation. Mines are frequently visited in which there is no discipline and such mines generally are objects of criticism and in many instances censure.

A prominent mining engineer with a life-time experience in the study of mine accidents, in a recent publication concerning mine accidents, writes: "Discipline in a mine is measured by the attitude of the men toward the regulations as advocated by the supervising official. If in his absence the men or part of them neglect their instructions in connection with their work or safety precautions, bad discipline prevails, whereas if all features of the regulations are complied with, good discipline prevails."

# Conscientiousness

## Lecture No. 16

**T**HE Standard Dictionary defines conscientiousness as governed by conscience; obedient to the dictates of conscience, as for example, a conscientious workman.

In the early days of coal mining, when most of the work in the mines was done by hand labor, and before the advent of mining machines or mechanical haulage, timbermen and tracklayers (especially the latter) were very conscientious about their work and took the true craftsman's delight in it, although their handiwork was far underground, away from the light of day. It was customary for such mine employes to chalk their initials on the rib, or roof, near where they had put a set of timber or laid a track switch. Many of these men lacked even the rudiments of an education, some could scarcely write their names, and only with great difficulty could they sign their initials. Yet they took a true pride in their work, and desired that all who passed that way might know who had done the work. That was true conscientiousness.

This trait of conscientiousness is one of the most essential qualities that a mine foreman or superintendent must possess in order to be a success; however, it is one of the rarest traits of character to be observed among the average run of mine superintendents and foremen. The mine foreman or superintendent who is really conscientious is rare; many such mine officials are concerned only with holding their jobs and meeting the paymaster at regular intervals. They do not realize that unless the mine is operated at a profit, and the mine employes make living wages, the mine cannot continue to operate; therefore their jobs as mine foremen or superintendents will be lost to them.

Probably there is no more frequent wish in the hearts of mine owners and managers than the one that their mine foreman or superintendent might become conscientious. If such mine officials *were* conscientious and exercised the same thought and care in the conduct of the mine's business that they did in their own *personal* business affairs, there would be no giving of jobs to inefficient

applicants for employment, because the applicant was a near relative or one who needed the work, or was a good fellow. If every employe were hired with a conscientious regard for the good of the coal company, as the first consideration, and a proper appraisal of the service the applicant would be able to render the coal company, there would be less coal company failures. "Every tub should stand on its own bottom."

Mine foremen and superintendents hiring men should stop and ask themselves this question, "Is this man apt to be a good investment for this mine; if I hire him will he give value received or will he not?" And only after the mine foreman or superintendent can give a conscientious affirmative answer to such a question should the man be given employment. Coal mines are operated to make money, or they should be, and if a single man is hired who cannot render efficient service and who is not worth the wages paid him, then the profits of the mine are decreased by the amount paid the inefficient employe, and if there are a number of such employes in any single mine, then the mine is sure to be operated at a loss. A coal mine is like a row-boat on a swiftly flowing river; every one in the boat, unless he is able to pull his own weight and a little more, by use of the oars, against the current of the river, is just so much dead weight that must be carried by those who are rowing the boat. To carry the analogy to the coal mine, the foreman, superintendent, and other mine employes are pulling the mine along in the face of adverse conditions; and, if a single employe cannot carry his own weight and a little more, then the officials must carry his weight in addition to their own in operating the mine at a profit.

Other mine employes who are efficient and who are able to "earn their salt" soon spot the inefficient and incapable employe and resent his presence in the mine. As a result they cease to put forth their best efforts, and if a number of employes do likewise, the output falls, the mine cost goes up, and the entire morale of the mine is ruined. The mine foreman or superintendent should be furnished a properly prepared and easily and readily filled-out daily mine cost sheet. He should be instructed in the correct method of filling out such sheets daily. If such forms are not supplied by the coal company management, then the foreman or superintendent should supply them, for it is just as much to their individual interests to have and to fill out such forms as it would be to take proper precautions to preserve their own personal health. If foremen fill out these forms conscientiously every evening of every day that the mine is in operation, then they will know whether or not the mine is operating at a profit, and if it is not they can ascertain the reason and can apply the proper remedies in the matter.

A conscientious mine foreman or superintendent usually is found in charge of a mine that is operating at a profit. Conscientious mine foremen or superintendents as a rule will not

remain in charge of a mine that is not operating at a profit, for there are always calls for their services at profitably operated mines. Coal companies are always on the look-out for conscientious mine foremen and superintendents.

## Ability to Organize

### Lecture No. 17

**U**NLESS the mine employe has inherited the ability to organize, has acquired it, or is quite willing to undergo a course of training to develop it, he had better not aspire to or assume the position of mine foreman or superintendent, for he will most certainly need to possess such ability if he expects to accept and remain in such a position.

Perhaps in no other occupation is such ability more necessary than in those in charge of underground coal mine operations. Fortunately, and as a rule, long before a mine employe is appointed to such positions he has given some evidence to those in charge of the mine, that he has the ability to organize. The trait may have been exhibited in the way in which an older miner directed the work of his buddies, or the skill manifested by a boss trackman or timberman in handling their gangs, or in a boss driver directing the work of other drivers. In all these various occupations the men have been under the watchful eyes of the mine officials who have not failed to note the qualities exhibited and to make mental notes for future reference.

An efficient mine is one that has its working force well organized, with each man in the place or position to which he is adapted and every one at work. This organization was instituted by the man or men in charge, as head officials of the coal company, and he or they are responsible for the success or failure of the organization; therefore they are careful to select for such positions as foreman or superintendent only mine employes who have the ability to organize their fellow mine employes into an efficient mine operating organization.

As a rule the larger coal mining companies have the best organizations, but occasionally a small company is found to have an excellent system, especially when the foreman or superintendent is a man of ability. The reason for the failure of many coal mines to operate efficiently or profitably is because of the mine foreman's or superintendent's lack of ability to organize their forces properly. No matter how capable a mine employe may be, he must be fitted into part of the mine's chain of organization and must be made to work properly or he will be of no value to his employer.

# THE PERMISSIBLE FOR YOUR COAL IS IN THIS LIST

Although coal mining conditions vary widely, the nine Hercules permissibles, listed below, will satisfactorily meet all coal-blasting requirements in this country.

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- HERCOAL-C:** Another black powder action, lump producing permissible. Lower count (about 400)\*, and stronger per cartridge than Hercoal-F.



- RED H F-L. F.:** Slow and strong with a cartridge count of about 356.\* A lump producer.
- RED H D-L. F.:** Slow and strong. Cartridge count around 316.\* Another lump producer.
- RED H C-L. F.:** Slow and strong. About 276\* count and a lump producer.
- RED H B-L. F.:** A fast, dense, strong permissible of about 280\* count with a smashing action.



- COLLIER C-L. F.:** Fast and strong but with higher count (about 320)\* than Red H B-L. F.
- HERCOGEL:** Dense and strong. Suitable for wet work. Count about 190.\*

\*NOTE: Cartridge counts refer to the number of 1¼" by 8" cartridges in 100 lb. of explosives.

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