

than one occasion have threatened a complete paralyzation of the nation's activities.

It is impossible to portray in intelligible terms the exact conditions under which coal miners work and live, because none but those who work in the mines can fully comprehend or realize the physical conditions prevailing there, as only those who work in them ever have opportunity for observation; and only those whose interests bring them into daily contact with mine workers or who are close students of statistical reports on coal production are familiar with the startling truth that for every two hundred and seventy thousand tons of coal brought to the surface of the mine one employee's life is sacrificed, and five times that number are maimed and injured. In other words, of every four hundred and fifty men employed in the mines, one is killed and five are injured each year. This makes a total of nine hundred persons who yield up their lives each year, and of forty five hundred who suffer serious injury. In no other industry in the United States are there so many fatalities in proportion to the total number of employees. But, sad and distressing as these facts may be, they are not the greatest source of discontent or complaint of this army of workers, for whom life holds few charms and offers few opportunities.

A peculiar feature of the mining industry, and one which more than all others affects the interests of those employed in the production of coal, is the fact that nearly one hundred and fifty thousand more men are employed in the mines than are required to produce all the coal which it is possible for our nation to consume; that is to say that, while the consumption of coal at home and the export trade abroad amount, in the most prosperous year, to two hundred and fifty million tons, this enormous production gave only two hundred days' employment to the men and boys at work in the mines. If the mines were worked three hundred days a year, they would produce at least one hundred and twenty five million tons of coal more than is consumed at home or sold abroad. As a consequence of this abnormal condition, a miner is enabled to earn only about two thirds as much wages as he would were he steadily employed; and as mining communities are,

with few exceptions, isolated from the centers of industry in other lines, opportunity is not afforded the mine worker to employ profitably the one hundred days of enforced idleness due to the non operation of the mine. Nor can any practical plan be adopted which would fully relieve the mining industry of this apparent surplus of labor, for the reason that a vastly greater amount of coal is consumed in the winter months than at other periods of the year, and as bituminous coal cannot be kept in stock without deteriorating in value and quality, it follows that more coal must be produced in the winter season than in the summer; and consequently during these months all the workers are steadily employed. That this overplus of labor has disastrously affected the earnings of mine workers goes without saying; in fact, for many years prior to 1897 the tendency of wages was downward.

The almost entire absence of combination or organization among the workers made it possible for employers to depress the earnings of their employees almost uninterruptedly each year until, in the summer of 1897, the conditions of employment became so unbearable and the spirit of unrest and resentment so general that the bituminous, or soft coal miners of the United States, having exhausted every peaceful measure at their command to secure redress for their wrongs, determined upon a suspension of operations in all of the states in which soft coal was mined. The date upon which the strike was to take effect was not even known to the miners themselves, they having instructed the officers of the then weak and struggling organization (at a convention held in the spring of that year) to order a cessation of work at whatever time the officers believed to be most opportune, and the possibilities of success most promising.

July 4, 1897, will be a day long remembered by the soft coal miners of our country. A few days prior to that date, from the office of the national union of the miners, a proclamation was issued calling upon all men employed in or about the mines in the states of Illinois, Indiana, Ohio, West Virginia, Kentucky, and the western part of Pennsylvania to cease work and remain in idleness on and after Independence day; and while the miners' organization at that time num-

bered less than eleven thousand members, one hundred and ten thousand men employed in the states named above threw down their tools, and the first great successful struggle for higher wages began. The contest continued until September 10, at which time a conference between the representatives of the United Mine Workers of America and the owners of coal properties was held which resulted in a partial settlement advancing the earnings of the mine workers an average of twelve per cent. The following January, the miners and mine owners of the central competitive coal fields, which embraces Illinois, Indiana, Ohio, and western Pennsylvania, met in delegate convention in the city of Chicago and agreed that thereafter all disputes as to wages and conditions of employment should be adjusted by joint conference and conciliation rather than by resorting to the arbitrament of industrial war. The result was that an agreement was reached increasing the earnings of mine workers eighteen per cent, and reducing the hours of labor from ten to eight in the states just mentioned.

The Chicago conference of 1898 was followed by conventions in Pittsburg in 1899, Indianapolis in 1900, and Columbus in 1901. At the first two, further advances in wages and improved conditions of employment were secured for the mine workers; and it is a pleasure to record the cordial relations which now exist between these two forces, which were formerly so antagonistic. Both operators and miners concede that the adoption of this humane and business like method of adjusting all differences affecting conditions of employment is preferable to the old method of strikes and lockouts, with the consequent bitter suffering and loss of profits.

During the period in which the bituminous coal miners and operators were working out a solution of the labor problem, the anthracite, or hard coal miners of Pennsylvania, one hundred and forty two thousand in number, were suffering and chafing under the most humiliating conditions of employment conceivable. Wages were so low and employment was so irregular that parents were compelled to take their boys from school, sometimes when they were less than ten years of age, and put them to work in the breakers and the mines; and this, too, in spite of the fact that the laws of the state of Pennsyl-

vania prohibit the employment of children at the mines until they have reached the age of twelve. For many years efforts had been made to organize the mine workers of the anthracite field, but owing to the struggle to establish equitable conditions of employment in the bituminous region, the miners' union was unable to concentrate a sufficient force in the anthracite district to bring about this result. During the years 1899 and 1900 further efforts were made in this direction, but the application of the blacklist, and the extreme poverty of the mine workers (which made it impossible for them to move to other fields should they be discharged), rendered the work discouragingly slow.

About this time it became obvious to the officers of the United Mine Workers of America that it would be necessary to inaugurate an aggressive movement in order to arouse from their lethargy the thoroughly subdued workers in the anthracite coal fields. With this object in view a large force of organizers was assigned to work among the anthracite miners; and by constantly mingling with them and addressing meetings, sought to revive their hopes and rekindle in their hearts the spirit of resistance which we feared would be put to the severest test before the close of the year 1900. While this agitation among the workers was in progress, efforts were also being put forth, through the United Mine Workers, to bring about a conference of representatives of the miners and the companies which operated the railroads and the coal mines of that field. But, to our dismay, the operators, feeling sanguine that their employees would not engage in a strike should one be attempted, received our overtures with ridicule and disdain. Having no alternative but to abandon the field or engage in a strike which, if participated in by all of the producers of anthracite coal, would seriously affect the industry and commerce of the eastern and New England states—provided it should be prolonged for a period of time sufficient to consume the several million tons of coal then held in reserve by the anthracite operators—we decided upon the latter course; and on September 17, the very eve of a presidential election, the most memorable struggle between capital and labor in the industrial history of our nation began.

With an organization of only eight thousand members in that field who were obligated to cease work upon the order of the miners' union; with a people the counterpart of which it would be difficult to find in any other section of this broad land—people differing widely in religious customs and observances, with racial characteristics and old world feuds dividing them—speaking so many languages and dialects that one half scarcely knew what the other half said; yet one hundred and twelve thousand men and boys responded on the first day to the call for the strike; and this number increased day by day until, when the call for resumption of work was issued, one hundred and forty thousand were idle. These men, heretofore, had never known what it was to strike in unison; one section always working while the other fought, thus making victory improbable because those remaining at work produced enough coal to supply the market and their idle brothers were ultimately starved into submission. But in this strike they seemed to be imbued with the single idea that in the struggle they must stand or fall together, and their devotion and loyalty to the organization and the principles it espoused were almost without a parallel.

No other industrial conflict of any magnitude has been characterized by such absence of rioting; it being a fact attested by the sheriffs of the several counties that fewer arrests for lawlessness were made during the weeks from September 17 to October 29, the day on which work was resumed, than for many months previous.

The successful prosecution and happy termination of this strike—the first ever won by the anthracite mine workers—secured for them an advance of ten per cent in wages; a reduction in the price of powder and other supplies; the semi-monthly payment of wages in cash, and tacit recognition of their right to organize. Since the resumption of work, many further concessions have been obtained and the conditions of employment materially improved through the instrumentality of their organization, which now embraces within its fold practically every man and boy employed in the mining industry in the anthracite region. And—what is, possibly, of greater concern and interest to the general public—hope

and promise are held out that the same system which prevails in the bituminous fields, through which differences are adjusted without resorting to strikes, will also be adopted by the operators and miners in the anthracite district.

Until a comparatively recent date a careful system of espionage on the part of the company had made the mine worker little more than an animate machine. Prior to 1874 the miners were paid, by many of the companies, with scrip, which was exchangeable for provisions at the company store. The use of scrip was discontinued in 1874, but many of the companies still retained a system whereby payment was made in cash should the miner be so fortunate as to have anything coming to him after the house rent, the bills for coal, for the grocer, the butcher and the doctor, had been deducted. The company paid the doctor an annual salary, and added the surplus collected from the miners to its profits. The general store was owned and operated by the company, although usually under another name than that by which the mining enterprise was known. In almost all cases the miners were compelled to choose between dismissal from employment and dealing at the company store, where prices were usually higher than at other establishments. By these means the men were rendered absolutely dependent upon the companies, often not receiving pay in cash from one year's end to another, and being deprived of all liberty of action in regard to their personal affairs. During the progress of the anthracite strike I was personally informed by a number of miners that they had not received one cent of their earnings in cash for over eleven years. But, thanks to the work and the spirit of organization among the workers, many changes for the better have been made in this respect during the past few years; and, although these abuses still exist, they are much less common than formerly.

A trip through a mining town is very interesting, particularly in the anthracite field. First, most conspicuous and most important is the breaker, or tippie; next, one notices the long rows of two or three roomed houses owned by the company or by some enterprising capitalist who finds the alluring disparity between outlay and income an incentive for invest-

ment in property of this character. These houses are often unpainted, and blackened by coal dust and rains; but clean and shining within, the miners' wives being, as a rule, neat and tidy housekeepers. The only method of distinguishing one house from another is by the number placed above the door of each. In many of the towns these rows contain from ten to twelve houses and are built flush with the sidewalk, having a tiny back yard where there is, oftentimes, a vegetable garden. Usually, in the larger towns, particular localities contain rows of six or seven double houses set slightly back from the walk, with a small front, side and back yard for each house; and evidences of thrift are often noticed in the vines trained above the door or over the porch which has been built by the miner on idle days. Flower beds in front and side yards, and a garden in the back, make some of these places quite attractive. Again, rows of double houses are set down in bleak and barren spots where there is not the slightest trace of the verdure which clothes the side of the mountain near by. These houses are usually built two or three feet from the ground, and under them a shelter is afforded the chicken, the dog or the goat. Many of the non-English speaking miners in the anthracite region keep goats. In the bituminous regions the miners who are able to afford it usually keep a cow, but the nature of the country in the anthracite districts, where the ground is rendered uneven by numerous cave-ins, makes it extremely perilous for cows to run at large; the nimble goat, however, is better able to avoid these dangerous places, and this, I presume, accounts for so many families owning goats.

The interior of the house of the mine worker, while barren of decoration, is usually scrupulously clean; and the few cheap knickknacks which serve as bric-a-brac evidence the desire of the wife to make home as attractive as possible upon the small sum at her command. The casual visitor is struck not only by the poor and unlovely aspect of the typical mining towns themselves, the pitiful endeavor to make the homes cheerful and comfortable, but also by the stoicism written indelibly upon the faces of the men and women one finds there. Particularly is this true of the people of the anthracite field, where there are many who might well serve as models for Millet's

famous French peasants; and more than one the hopeless dejection of whose countenance and bearing brings to mind Markham's touching poem—The Man With the Hoe.

Of course, it is said by many that the mine workers are a shiftless, intemperate, illiterate lot, who are without ambition, who have no high and noble aspirations; but the many who say so do not know these people as I do; they do not pause to consider that practically all of these men and women have begun a life of drudgery at a very early age—at an age, in fact, when the children of the average American citizen are considered scarcely more than babies; that they have worked alone, away from the civilizing influence of contact with their fellow beings, under such conditions and for such weary hours that neither thought nor time remained for recreation or for study. I know them to be as a class honorable and upright in the payment of their debts; I know that lack of honesty in matters of this kind means ostracism by their neighbors; I know that during strikes it is a common occurrence for one family to divide the last bit of bread in the house with a neighbor whose supply of provisions has become exhausted; and I know that the standard of morality among them will challenge comparison with that of any other class of people in our land. In my own experience I have many times witnessed acts of such heroism and self sacrifice among them as to make the valorous deeds of our soldiers at home and abroad pale into insignificance by comparison; there are innumerable instances that can be cited in which mine workers, in the cave-ins which every now and then befall, have knowingly and willingly surrendered their lives in an effort to rescue their entombed fellow workmen.

First, the boy of eight or ten is sent to the breaker to pick the slate and other impurities from the coal which has been brought up from the mine; from there he is promoted and becomes a door boy, working in the mine; as he grows older and stronger he is advanced to the position and given the pay of a laborer; there he gains the experience which secures him a place as a miner's helper; and as he acquires skill and strength he becomes, when in the height of his manhood and vigor, a full fledged miner. If he is fortunate enough to escape the

falls of rock and coal, he may retain this position as a miner for a number of years; but as age creeps on and he is attacked by some of the many diseases incident to work in the mines, he makes way for those younger and more vigorous following him up the ladder whose summit he has reached. He then starts on the descent, going back to become a miner's helper, then a mine laborer, now a door boy; and when old and decrepit, he finally returns to the breaker where he started as a child, earning the same wages as are received by the little urchins who work at his side.

Thus, in these few words, is told the simple story of an anthracite miner's life in its entire course from the cradle to the grave.

There is no incentive for ambition in the average miner's life. He cannot rise to places of eminence and wealth; only one in five hundred can even be given place as a foreman or superintendent, and these are positions which few miners care to hold. The work at the mines is wholly in charge of managers or superintendents, the chief cause for whose retention and promotion is their ability to produce coal cheaply; and this has been usually accomplished by depressing the earnings of their employees, or insisting upon the performance of more work than men are physically able to do. I am of the opinion that the men who own the mines, those who hold the stock in the large companies and profit by this cheapness of production, do not know the means employed to secure it. They do not know the dangers which make a miner's life a daily sacrifice; they do not realize, as they bask in the comfortable glow of a coal fire, that oftentimes the hearth of the man whose labor made their comfort possible is cold and cheerless because he cannot afford to buy enough of the coal which he has mined to keep his wife and babies warm.

As a people we are forgetful of the fact that every convenience we enjoy, every device that enhances our material comfort and ease, is purchased at the cost of infinite pains, and often of actual suffering, to others. We do not remember, when, by touching a button, the house or office is lighted or machinery is set in motion, that men have dug in darkness to furnish the power for the operation. We are unmindful of

the fact, when the limited express or the ocean greyhound speeds us from ocean to ocean or from land to land, that those whose labor supplies the energy by which we are able to seek health or wealth or happiness in other climes, trudge from home to mine and from mine to home, year in and year out, too poor to avail themselves of the facilities their toil has supplied; that they work below ground, scarcely seeing even the daylight beauties of the home neighborhood, with no opportunity to grasp the means of culture and refinement brought to our very doors from the old and new world through their patient efforts.

If the great, sympathetic American public could see for itself, could know as I know the sorrows and the heartaches of those who spend their lives in the coal mines of our country, I am sure that they would give their unqualified support to every effort which is being made by the organizations of labor to ameliorate the conditions under which these men work, and to secure for them wages commensurate with their hazardous employment; thus enabling them to take the little boys from the breakers and mines and place them, for a few years at least, in our schools, where they properly belong, and where they may receive their birthright of education and enjoy the sunlight so needful to their physical development. To make this great movement a success we are bending our every effort, and we look with confidence to the American people for sympathy and support, for we are firm in the belief that any action which raises the standard of our citizenship confers upon our country a measureless blessing, the benefits of which will be increasingly apparent as the years go by.

A PRACTICAL VIEW OF AMERICAN MACHINE SHOP CONDITIONS.

BY M. COKELY.

M. Cokely has for eleven years been engaged in systemizing and organizing the work of various American shops with a view to determining costs, stopping leaks, reducing expenses, and increasing output. He was engaged as inspector with the Edison company, and as superintendent under the receiver of the Mather Electric company; was with the Jeffrey Mfg. Co., Columbus, Ohio, introducing piecework and other advanced systems; with the Falls Rivet and Machine Co. during reorganization; with Clark Bros., as superintendent; with the C. W. Hunt Co., the Payne Engine Co., the Chicago Malleable Castings Co., and the Plano Mfg. Co., as expert and superintendent. He has made economical production a study, and has an intimate acquaintance with the practical work of the shop.

In considering the relations which should exist between employer and employee in industrial establishments, it is necessary to take into account their records and surroundings and the influence these exercise on character. The energy which the American workman has exhibited has not been equaled in any other part of the globe. This is true not only of the native born but also of the naturalized foreigner. The latter soon becomes imbued with that all pervading spirit of activity which is a recognized national American characteristic. How that spirit originated I am not prepared to explain. It may be due to race intermixture, to political or climatic conditions, or to all three; but this is positive—that the commingled races of people who have made the United States famous have emigrated to pretty much every other quarter of the earth but in no place have they developed the same characteristics or produced the same results as they have within the boundaries of the United States. Suffice it to say that this peculiarity exists and that it is nurtured by the influence of example. It is a fact that the workman has been educated to a realization of the necessity of comfort and luxury. He is a witness of it and in touch with it nearly every hour of his life. In the mansion of his next door neighbor, in the streets and in the conveyances that traverse them, he is side by side with it. As he