Second Section

The Porcupine Advance

The Pioneer Paper of the Porcupine Established 1912

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RUSSIA USING HITLER TACTICS - RIDDELL

Don't Go Down In The Mine Daddy - - Unless The 'Rope' Is Government Tested

Sections of mine rope samples are tested for torsion by the machine in the foreground. At left, operator makes last minute check on rope diameter before testing strength.

What child has not, in bewildered wonderment, followed the slow descent of a spider on its self manufactured filament. Two questions always came to mind: how does the spider produce this fine thread-like substance, and how can such a flimsy, hard-to-see little hair support the weight of the spider's comparatively heavy body?

Engineers who first produced modern mine rope probably got their inspiration from the spider. Elasticity and great strength are the main qualities of a spider's thread or a modern mine rope which enables a tenton cage or skip in some Ontario mines to service a unit of our province's great mining industry.

The rope, as hoistman refer to the coiled cable on the huge hoisting drums, is the lifeline of all Ontario underground mining operations. Its duties are as complex and varied as its construction.

It is the purpose of this article to tell in part the story of mine ropes, their particularities and the means used by rope manufacturers, the mining industry and the Ontario Department of Mines to constantly improve methods of production, use and care of such ropes and hosting equipment for the greater safety and efficiency of our mining operations.

Few people in Ontario are aware of the tremendous amount of work involved in the inspection and testing of mine hoisting equipment by the Mines Inspection Branch of the Ontario Department of Mines. Technical personnel made up of mechanical engineers and assistants at the Government Rope Testing Laboratory at Departmental headquarters, Queen's Park, in Toronto, have established an enviable reputation in a highly specialized field. Ontario can boast possession of one of the best equipped mine rope testing laboratories in the world.

A few statistics reveal the scope of operations. There are presently 209 hoists and 357 ropes in service in Ontario mines. The combined length of these ropes totals 768,687 feet or 146 miles. Their diameter varies from five eights of an inch to one inch seven eights, the average being about one and one-eight inches.

Ever since 1922 the Rope Testing Laboratory of the Ontario Department of Mines has performed more than 13,000 rope tests involving destruction of a rope sample on huge machines. The most recent machine purchased by the Department can exert a pull of one million pounds, which is more than ample for all practical purposes. Delicate balances can record a pull of twenty-five pounds and a recording graph gives the story of the tensile strength of the sample.

Less than sixty years ago the mining ropes used in underground operations were either made of manilla or were flat, braided, belt-like ropes. As high speed hoist and skip practices were introduced by modern mining and depth of mining operations increased, stronger and more elastic ropes were called for, and so rope manufacturers developed the cable-like metal rope with the manilla core which is in general use today.

Most ropes used in Ontario mines are composed of many strands of wire of high carbon steel. The core around which these strands of wire are layed is soaked with a lubricant which exudes as the strands squeeze it in normal operation. This insures complete lubrication of the inner strands of wires. Whenever a rope sample is forwarded to the Department for testing purposes a piece of this core is examined and a chemical test determines the amount of lubricant left. As time goes on less and less lubricant appears in these tests and finally when it is thought that the core is too dry or does not contain sufficient oil, the rope is condemned. A rope may be condemned for other reasons. It is a fact that when a rope shows a deficiency in one test other tests, such as visual examination, extension and torsion tests will reveal the weakness.

Corrosion and fatigue, or embrittlement, are the worst enemies of mining ropes. Corrosion does not necessarily appear on the surface layers of a rope. It may come from foul air in a mine or from water in a "wet" shaft. The Paymaster accident of February 1945, was attributed to a corroded mine rope and corrosion was not evident through normal inspection.

The new legislation introduced at the last Session of the Ontario Legislature calls for a complete test of a sample from any rope purchased by an Ontario mine prior to the installation of the said rope. The tests include destruction of the sample to indicate the original tensile strength; corrosion test of all the wires in the rope, and a lubrication test of the core. Such tests will be repeated every six months until the rope is condemned.

Research into better methods of lubricating mine ropes is being pressed by the petroleum industry and they, along with the Ontario Research Foundation, and the Inspections Branch of the Department of Mines, as well as the rope manufacturers, are collaborating in an effort to increase the qualities and safety factors of mining ropes.

One of the greatest contributions of Ontario mining men to the safety of hoisting operations is the new 'dogs' which act as brakes on mining cages. In the case of the Paymaster accident, once the cable broke the dogs failed to stop the plunging cage. They were so built as to grip the shaft guides the very instant the rope broke. Unforunately, notwithstanding the fact they did grip, the wood torn from the guides filled the teeth of the safety catches and rendered them useless. The new safety catches, evolved through research, consist of one or more teeth and a sharp cutting edge which immediately sheds the wood torn from the guides by the engaging teeth.

More than sixty percent of Ontario mines are now using this type of safety catch and it is expected that soon all our mining cages will be so equipped. New regulations call for at least three tests following the installation of these dogs and they are the most severe tests called for by any mining regulations in the world. Maximum speed and load conditions are called for and must be carried out in the presence of one of the mechanical engineers on the staff of the Mines Inspection Branch. Already 200 free-fall tests are being carried out in 1947, and this year 108 such tests have been made to the satisfaction of the Mines Inspection Branch.

In an effort to offset hoisting accidents specialists have suggested that larger hoisting drums and sheaves be used. This, they say, will reduce rope damage to a minimum. Only three layers of cable may now be permitted on any hoisting drum.

Complete records of all tests carried out by the laboratory are compiled and published by the Department of Mines. These are widely distributed and are proving of inestimable value to the manufacturers of mine hoisting equipment.

Work being done by the Mechanical Engineering personnel of the Ontario Department of Mines has attracted universal attention. Inquiries from all parts of the world have been received for information on the methods and techniques employed here. It is believed that although accidents will occur their rate will decline to a very low figure as a result of exhaustive research and tests being carried out by the Rope Testing and Mechanical Engineering sections of the Mines Inspection Branch.

(Toronto Saturday Night).

One of the reasons why the provinces of Canada do not get better government, and why the electors are often so little interested in their getting better government is that their elections are so seldom fought on really provincial issues. . . even the Toronto Telegram cannot quite conceal its amusement at the idea that the present Ontario election has anything to do with its alleged cause - the project to switch the Central Ontario area from 25-cycle to 60-cycle.

The electors of Ontario will cast their votes on June 7 with a view to their effect upon the Dominion by-elections of the following day and the expected Dominion general elections later in the year. The election date was chosen for that purpose.

Professor Warns Alumni Russians Are Past Masters At Psychological - Aggression

The University of Toronto Alumni which meets twice a year for dinner and a speaker were lucky to have as their speaker for the spring meeting, Dr. Walter Riddell. Despite a heavy rainfall more than 100 members and guests were present to hear this eminent speaker. The weather didn't seem to dampen Dr. Riddell's spirits and he gave an address which lasted more than two hours and was listened to with interest.

Miss Norma Routliffe, English and History teacher at T.H. & V.S. introduced Dr. Riddell after Mr. A. Gillies president of the Alumnae Association, announced that Dr. J. B. McClinton would ramble through the minutes o the fall meeting.

Dr. Riddell, who is now a professor at the University of Toronto, began by saying that he was interested in the Porcupine Camp from way back. He said he had married the daughter of Murray Clark who wrote mining law books in Ontario and invested all his money in mining stocks.

Turning to the international field Dr. Riddell said that it had been his privilege to represent Canada at the League of Nations in Geneva and abroad. Having travelled widely abroad he said that he had seen many things which had influenced his thinking on world affairs.

"We have all gone through two wars and we know what aggression is," he said. "You've heard about the atom bomb, asphixiating gas and bacterialogical warfare. Aggression is invading the area of influence of another country and is as old as history.

"From the time of the Trojan horse man has used psychological warfare. Machiavelli systematize the methods of psychological warfare in his book The Prince which was studied closely by both Hitler and Mussolini and the results are now well known.

"The League of Nations created a different problem. The nations had to pacify public opinion and they became very adept at it. This warfare was called Psychological Aggression.

The Sino-Japanese war showed the great skill of the Japs in getting around the League Covenant. Any threat of war became the interest of the League but pooh poohed any idea that the Japanese were using incidents to cover up the fact that they were taking over the counry from the Chinese. The Japs moved into Manchuria while the League delegates kept saying that it was just another incident." Even though Dr. Riddell was quite sure what the Japs were up to, the senior delegate for Canada would not be convinced that the Japanese were seriously carrying on a war.

"The techniques of psychological aggression can become very involved." Said Dr. Riddell.

"The technique takes many forms. One of them is to tell th epeople that they are a great civilizing force and another is to tell them that they are a master race."

"In Mussolini's mission to civilize Africa the Walla, Walla incident started the ball rolling. But the League had learned a few things from the Japanese incidents and this time it seemed as if something might be done. But they said they couldn't see any blame on either side."

"Mussolini made up other incidents, Italy was declared an aggressor and pressure was brought to bear. Mussoline then used the fear technique and warned them that many things would happen if they did anythin' A treaty was made with Mussolini but he had had it changed to read tha aggression in Europe was the onl reason for League sanctions, leavi him free to carry on his war against the Ethiopians.

"I was much annoyed about the sanctions," Dr. Riddell declared, "they lacked the very things that would stop him. I got up in the League and said that oil sanctions would stop him. Then the fat was in the fire. Mussolini had a fund set up to buy up the delegates and was able to influence them all but Anthony Eden Eden later had to resign.

"I was called the tool of Anthony Eden and I could do nothing." Said Dr. Riddell bitterly. "The last chance of stopping Germany was then gone These aggressors are a serious lot an they won't start until they think that they can win and once started they are very hard to stop. The psychological technique gives the aggressor time to do other necessary things behind the smoke screen.

"Hitler made all sorts of promise to Chamberlain. His idea was to tak one thing at a time and Chamberlain paper was all a part of the technique These techniques are thought out well in advance.

What caused the breach between Russia and Hitler were the demands made upon Hitler by Russia. Hitler decided that rather than give in to the Russian demands he would go to war.

"Russia now controls all the country which they had demanded from Germany. This was worked by psychological aggression at which the Russians are past masters, the others were merely beginners."

Dr. Riddell mentioned Himmler's speech before his death when he said: "Next time we'll plow our furrows deeper." The Russians, he said, are plowing much deeper.

"This is a much cheaper way than using armies. I am not as afraid o' atom bombs as I am of this kind of warfare," Dr. Riddell said. "It is for the control of men's minds and we must wake up to the situation. We are beginning to get a defensive alliance of the Western countries. These Russians are masters of the game and are nothing to pooh pooh — we must face it — it is the most real thing we have to face today."

"I look upon Moscow and the Soviets as the greatest competitors we have today. No country in the world believes more in its destiny to rule the world. They are international and they believe they have a plan for the world and one that will be only good when they have the world to work in.

"In business we try to put out a better product but it is hard to convince many people that our way of life is a better thing."

Dr. Riddell then suggested that what we needed was a better information service to tell the people what is being done.

"I found low wages and many children starving.We are not perfect but we should get the Russian attitude that it is our manifest destiny and to tell the world that they will get more out of our way of life than out of the Communist system.

"The labor and socialist groups in Europe are the best fighters against Communism. They don't want ultra capitalism or North American Capitalism but they do want to work out their own ideas."

"It isn't charters or covenants that keep the world at peace," said Dr. Riddell in answer to a question, "What is your opinion of the success of the United Nations?" Said Dr. Riddell: "It is whether or not the nations will carry out their covenants or have the power to carry them out."

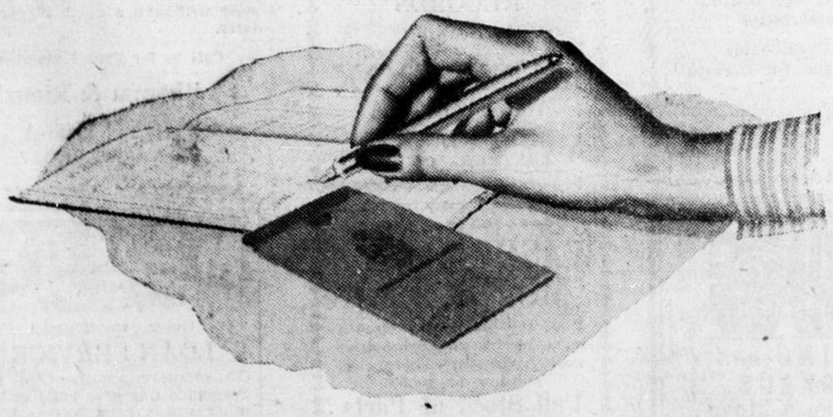
"The United Nations is a great sounding board for those interested in psychological warfare," he said. "If we don't back it up now we are bound to fail. The veto is there for a reason — we couldn't have a league if it weren't unanimous with all the nations.

"If we have psychological aggression for the good things of life — Christianity for example — we will need more than just the machinery. Probably why the United Nations

(Continued on Page Three)

Ottawa boasts its best tulip display in years and with her tiny watering can it would take Diane Boucher a long time to water the 400,000 Dutch blooms that enrich the natural beauty of the driveways and parkways of the Canadian capital every spring. Manyof them are a gift from Juliana of the Netherlands. Planning and planting of vari-colored designs are carried out by the Federal District Commission.

Don't try to save too much



It may sound like unusual advice from a bank.
But it's based on our experience with thousands of depositors, and we think you'll agree it's sensible.

The simple secret of saving is *regularity* . . . deposit money regularly, and leave it there until you have the amount you want for some specific purpose.

If, on the other hand, you try to save more than you can afford it becomes not only a burden, but an impossibility. You find you have to miss one or two deposits, you find yourself drawing out your savings for some current need.

Decide on a sum you can afford, make your deposits regularly, and *enjoy* saving!

THE BANK OF NOVA SCOTIA

W. Long, Manager, Timmins, Ont., Pamour, Ont.