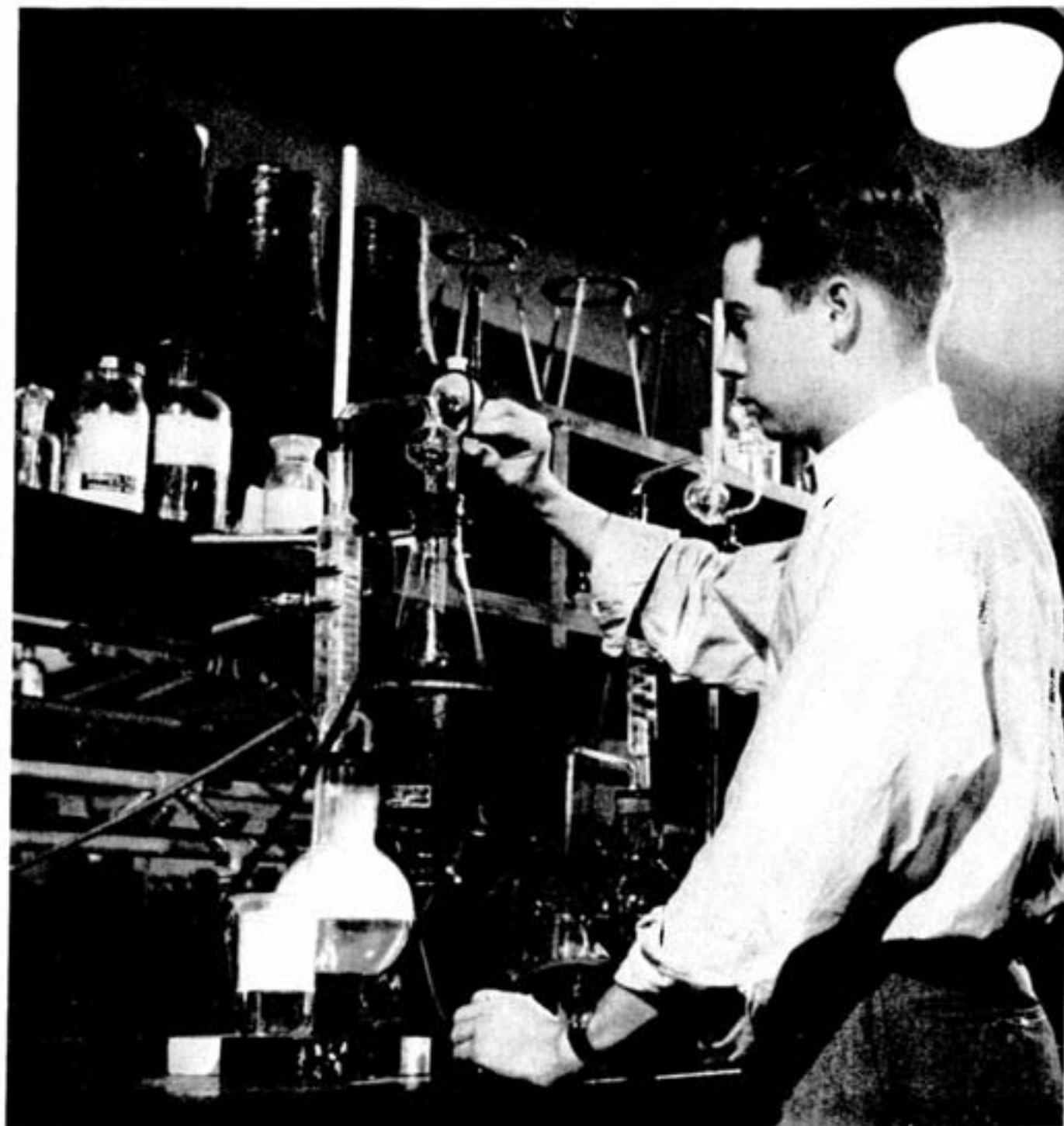


INCO TRIANGLE

VOLUME 9

COPPER CLIFF, ONTARIO, JUNE, 1949

NUMBER 3



Making an Assay in the Laboratories at Copper Cliff



Published for all employees of The International Nickel Company of Canada, Limited.
Don M. Dunbar, Editor

EDITORIAL OFFICE COPPER CLIFF, ONT.

The Front Cover

This month's front cover picture draws richly deserved attention to a contingent of Inco employees who work quietly and effectively in one of the most important but least publicized departments of the organization, the laboratories.

In the picture Andrew Humphrey, chemist, makes an analysis in connection with the smelting of copper and nickel sulphides. This is one of several types of assay required to show the efficiency of new smelting methods which are being developed at Inco.

Every day the diligence, patience, and brains of Inco's laboratory workers help broaden the horizon of science, benefitting not only our own operations but also those of the mining industry as a whole.

Incidentally, in answer to the question which has already popped into the minds of all you gals, Andy came from Nova Scotia, has been with the Company about a year, and, at time of going to press, is SINGLE!

The Path of Glory

It is with some timidity that we enter the field of politics, but there comes a time in the life of every editor, no matter how pure and innocent his bringing-up, when he finds himself faced with the unavoidable obligation to advise the men who would run the country.

Somebody has said that there is to be an election on June 27, and somebody else has suggested that there are three main groups who seek the favor of the electorate. Still another, who has probably been listening to the radio or reading the papers, or whatever, states that there are three men rather prominently identified with these groups, Coldwell, Drew, and St. Laurent we believe the names are.

We wish to offer the suggestion, quite voluntarily on our part and free to the first of the three who grabs at it, that the proper way to win this election is to promise to freeze all golf scores at 45 strokes.

On Its Toes

This Triangle job takes a fellow into a lot of out-of-the-way places and, as the lawyers say, "without fear of successful contradiction" we can state that as long as they're Inco places they're bound to be interesting.

What strikes us particularly about the round of assignments this month's issue seems to have brought up is that Inco is "on its toes" no matter where you look in the broad range of activities covered by our Company. In such widely diversified fields as advertising, construction, exploration, and even the re-grooving of head sheaves, to name just a few at hand, our Company is not only doing a good job for itself but is also contributing something constructive and progressive to the mining industry.

Out of this we get a feeling of satisfaction. It's nice to be part of an outfit that's "on its toes".

Peppy Teen-Age Club at Willisville



Under the leadership of Mrs. Bill Tilston, the Willisville Teen-Agers Club is winding up a highly successful and enjoyable season. Sons and daughters of Inco men employed at Lawson Quarry, the Willisville group staged several parties during the winter months and raised money for the Red Cross and other worthy causes. They're seen above in their snazzy crested jackets: front row, left to right, Billy Green, Stewart Carlyle, Bobby Campbell, Babe Stamp; just behind them, Clayton Bond; standing, Jim Stephens, Mrs. Tilston, Patsy Spry, Reva Whitty, Eva Leach, Mona Lee, Patsy Alphonse; behind them, Bill Stephens.

The Good Earth

Citizens of the new end of Cobalt St., Copper Cliff, were startled out of their siestas early one evening last month by a wild scream which splintered the peaceful air into small pieces. Hasty investigation disclosed that Len Klitchner, turning over the good earth for his vegetable garden, had spaded up a highly aromatic deposit of smelts which he had buried early in the spring after he and his nice family had eaten their fill of a gift from a friend.

Quickly revived by a potion of ancient prescription, administered by Frank Zurbrigg, neighbor and fellow gardener, the irrepressible "Kitch" immediately took his usual constructive view of the situation. "By gad," he said, "I'll plant fried potatoes in there and grow myself a fine crop of fish and chips."

Lilac Bushes Laden

A special edition of the Triangle is made up each month containing news of particular interest to the employees at Port Colborne and their families, and a regular contributor to it is a happy Scot blessed to a degree with the kind insight and gentle philosophy of his race, by the name of Alec McNay.

Robert Burns himself could not have done a nicer piece of writing this month about the sweet promise of his garden in the spring than did Alec, for all his lack of pretension as a scribe, and we quote him for all to read:

"The extra hour which we gain in daylight is being used to advantage either at the golf course, or on the lake fishing, or in the back yard planning, sowing and planting. The earlier blooms have passed, but now there

are bleeding heart and forget-me-nots, mountain flox and arabis, tulips and honesty (limeria), polyanthus and pansies, early peonies and buttercups, columbine and cornflower, daisies and iris, then lilac bushes laden with blossom white, helio and purple, blending with the new light greens of the willows, the chestnuts, the hawthorns and the maples to transform our back yard into a place of beauty for quiet relaxation."

The man has poetry in him, and appreciation of the artistry of the Almighty.

Nickel Makes Hit At Big Trade Fair

At the second annual Canadian International Trade Fair which opened in Toronto on May 30 with trade representatives from all over the world in attendance, much favorable comment was heard about the Inco exhibit.

Covering about 960 square feet, the Inco display featured a double theme. Part of it presented nickel as the "unseen friend" which makes possible many of the most advanced products of our civilization. The rest of the exhibit showed examples of nickel applications in industry. A continuous slide film in color depicted nickel applications in industry.

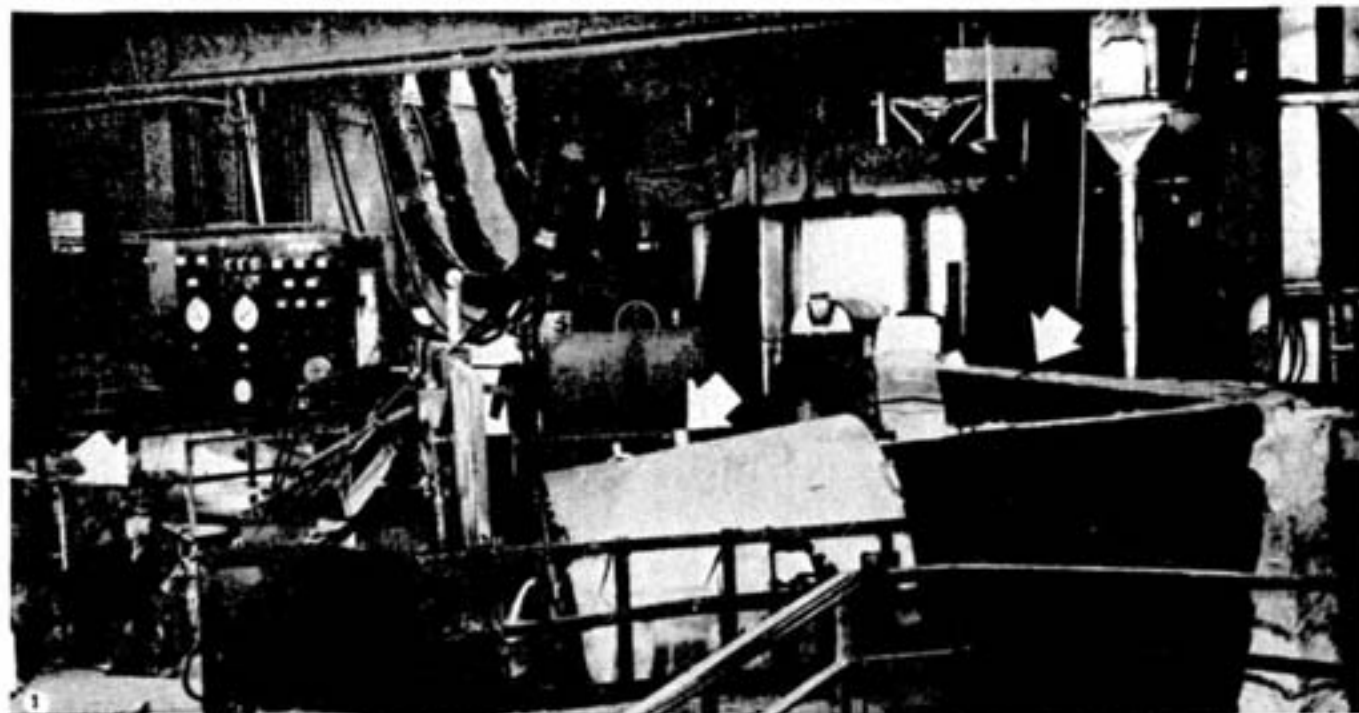
In addition to the actual Inco exhibit, nickel was represented at the Trade Fair as the principal component of a multitude of products displayed by various manufacturers, further evidence of its constant role as an "unseen friend".

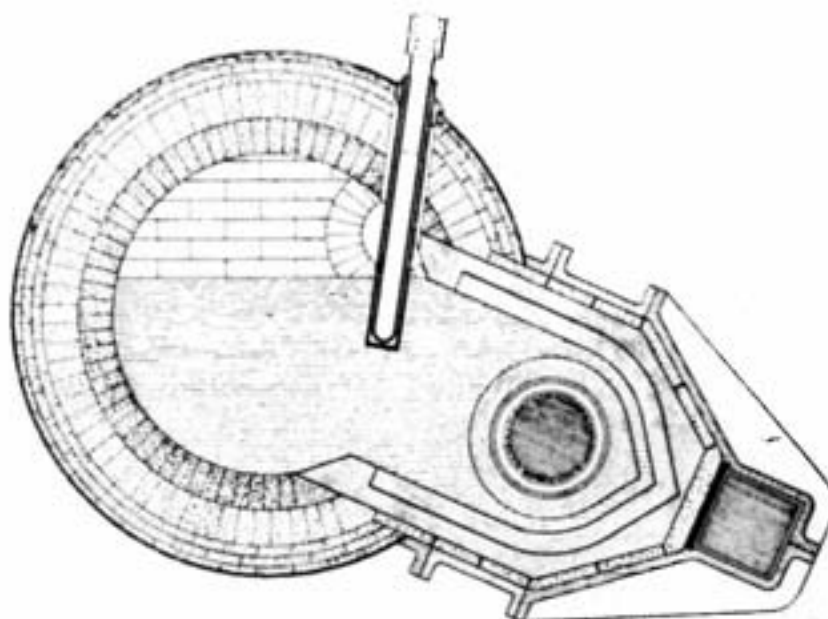
At the 1941 census the number of blind persons in Canada totalled 9,962 and deaf-mutes numbered 7,194.

INCO FAMILY ALBUM

Round and round she goes, and where she stops we get 'em to pose. The Wheel of Chance this month brought the Triangle camera face to face with: (1) Mr. and Mrs. Bill Wilkins (Port Colborne) with Doreen, 18, and Marlene, 6. (2) Mr. and Mrs. Hector Otto (Levack) with Ricky, 3, Tommy, 8, and Nancy, 1. (3) Mr. and Mrs. Gordon Zinkle (Copper Cliff Lab.) with Sharon Ann, 2, Shirley May, 11, and Gordie, 5. (4) Mr. and Mrs. Archie Bowen (Garson) with Malcolm, 16, Muriel, 12, and Dolores, 9. (5) Mr. and Mrs. Edgar Gauthier (Murray) with Carol, 5½, Ray, 4, and Helen, 7. (6) Mr. and Mrs. Nick Perpich (Frood-Stoble) with Carol, 9, Janice, 8, and Marlon, 5 mos. (7) Mr. and Mrs. Charlie McFarlane (Creighton) with Garry, 7, Bob, 4, Peg, 9, and Pat, 6.







"Heat Eye" in Place

Cross-sectional view of a pour hearth at the Copper Refinery showing how the "heat eye" assembly projects into the metal to provide an ingenious means toward temperature control of the molten copper. Radiant energy from the bottom of the tube, which assumes the temperature of the metal bath, is directed by a lens system to a very sensitive thermopile in the eye, and a current is created which operates a recording instrument.

Nothing Left to Chance When Copper's Temperature Taken

The importance of metal temperature measurement and control in non-ferrous melting and casting operations cannot be too strongly emphasized. This is particularly true at the Copper Refinery electric furnace installation, where electrolytic copper cathodes are melted under non-contaminating conditions and cast into the many regular and special shapes required by the trade.

In the electric melting operation, temperature of the molten copper is dependent principally on the power input to the direct-arc furnaces and the rate at which copper is charged. Optimum casting temperatures have been determined for each size of casting produced, because of the influence of this factor upon their ultimate physical characteristics. Other reasons for proper control are enhancement of mould and furnace refractory life, and efficient utilization of power expended. The precise measurement and control of temperature is thus a necessity in order to establish correct overall operating conditions.

Three pyrometric methods are in general use in the Refinery installation. These are thermoelectric, radiational and optical.

Taking Copper's Temperature

Photo No. 1, which shows the general arrangement of launders and pour hearth at the casting side of one of the two furnaces, also illustrates the utilization of each of the three systems. On the right, in the launder through which molten copper flows from the melting furnace, a thermocouple is located. When two dissimilar metal wires are joined at one end, in this case Chromel P and Alumel (proprietary names for nickel-

chromium and nickel-aluminum alloys) and this joint is heated, an electromotive force develops between the two free ends, the magnitude of which depends upon the difference in temperature between the joint and the free ends. This is known as the thermoelectric effect. In substance, the thermocouple is inserted in a carbofrax tube which projects into the metal stream. Here the principle of heat transfer is that of conduction or "touching", and the electromotive force created in the couple is transmitted to an indicating-recording instrument mounted on the furnace control panel (left background).

Indicated in the center of the photo is the location of the radiational system. At this point a Rayotube or "heat eye" determines the temperature of the metal in the pour hearth. The assembly consists of an outer carbofrax tube, with inner high density porcelain tube, joined by a stainless steel sleeve to the thermo-responsive eye. The latter is protected by a liquid cooled head. The method of cooling is of interest; when cold water direct from the mains was first used, fogging of the lens occurred because of vapor condensation which caused incorrect temperature readings. This condition was overcome by using a source of thermostatically controlled warm water.

Pour Hearth Cross-section

The accompanying sketch depicts a cross sectional view of the refractory lined pour hearth with low frequency induction equipment, and "heat eye" assembly projecting into the metal. Radiant energy from the bottom

of the tube, which assumes the temperature of the metal bath, is directed by a lens system to a very sensitive thermopile in the eye. Here, again, a current is created which energizes an indicating-recording-controller. The controller in turn regulates the power input to the low frequency induction unit in order to level out temperature fluctuations of the metal in the pour hearth.

The optical method is used by Joe Lawton at the left. This principle is further illustrated in photo No. 5, where Fred Donley uses a disappearing filament instrument of the potentiometer type and sights on the metal stream as it flows into the water-cooled copper vertical mould. (Note—the safety chain screens were lifted up for the purpose of clarity of this view).

Frequent standardization and checking of equipment is systematically carried out. The Chromel-Alumel couples used are fabricated at the shops from purchased wire. In photo No. 2 Johnny Ray will be seen welding a hot junction. No. 3 shows Stu Smythe and Mike Shamley of the Metallurgical Department checking thermocouples against the master standard. In photo No. 4 Rene Bourgeault of the Electrical Department, on his regular morning check of temperature equipment, balances one of the two indicating-recording instruments for each furnace.

Retires on Pension, 34 Years' Service



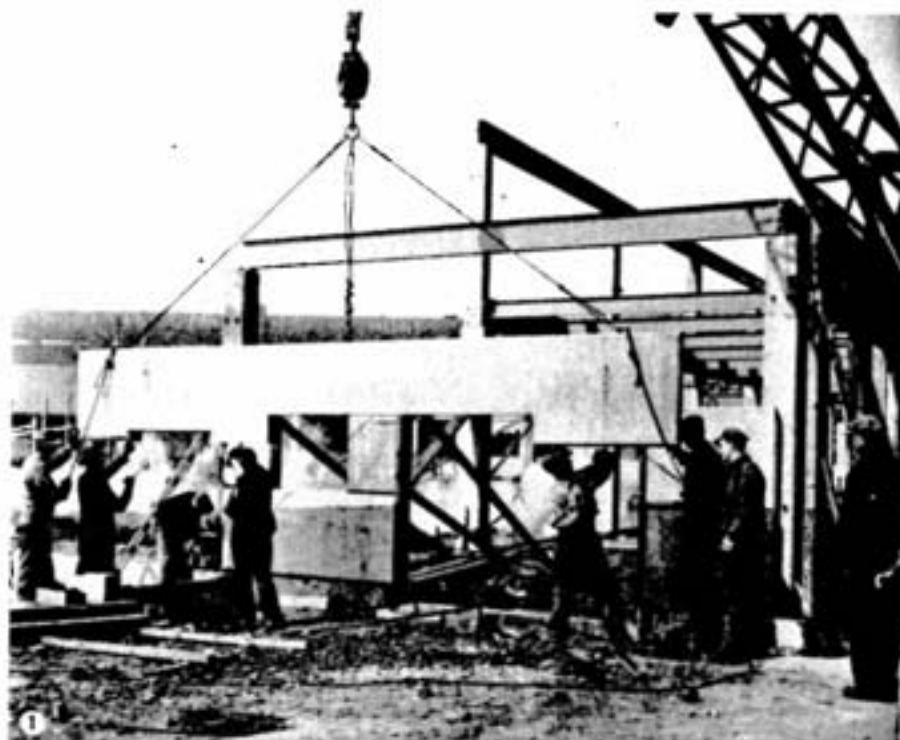
MR. AND MRS. RUPOLI

The boys over at the smelter are going to have to get along without Giuseppe Rupoli, who retired on pension June 1 with credited Inco service of 34 years and 7 months, but from his cozy home on The Hill in Copper Cliff he'll be checking every morning to make sure they still have that good old smoke coming out of the stacks.

Born in Italy on May 10, 1884, Giuseppe first came to Copper Cliff in 1906 after three years in the building trade in the United States, but he took a fling at prospecting in the Cobalt area and a return trip to his old home before settling down for good in the smelter town.

He was married in Italy in 1911 to Zda Imperatori; of the six children born to them, two are living. They have three grandchildren.

There are 1,025 mills in Canada producing livestock feed; 918 of them are in Ontario and Quebec.



Newest Idea in Construction of Changehouse

The most modern type of construction in vogue today is being used in the changehouse now going up at Copper Cliff Smelter. Inco's Mechanical Engineering Dept., alert as usual to the latest developments in industrial design, selected pre-cast concrete Haydite slabs for the new building, which will accommodate 800 men.

The 8-inch Haydite wall is said to have the same insulating value as a tile wall with brick veneer, is as nearly permanent as construction material can be, presents a smart appearance when finished, and can be erected in less than one quarter of the time it takes to put up the tile and brick wall.

This type of construction was first introduced less than five years ago, and has not been used before in the Sudbury district. Some building authorities are predicting that it will eventually replace brick.

Five Tons at a Lift

Plans for the new changehouse were first completely detailed by the Mechanical En-



gineering Dept., the size of the concrete sections being limited to a weight which could conveniently be handled by crane; in this case the maximum is five tons.

The slabs are pre-cast in a factory under conditions allowing accurate control, and are vibrated and compacted as they are cast to give a dense structure. After the concrete has set it is taken out of the moulds and further cured by live steam.

Shipped from the factory at Cooksville to the building site in the smelter yard, the big slabs were soon being swung into place and the new "dry" was well under way almost as soon as it was started. The men from the plant, passing to and fro at change of shift, are getting quite a kick out of the speed with which the building is shooting up.

In the first of the accompanying pictures the lintel is about to be moved into position over the entrance to the boiler room. It will be noted that the slings by which the crane lifts the slab are attached to hooks in the concrete. Each of these hooks or eyebolts has a wooden plug in a corresponding position on the bottom of the slab.

Workmen are busy chiselling out the plugs so the slab will fit snugly over hooks of slabs already in place. If at any time an alteration or extension to the building is desired, the hooks make it a relatively simple proposition. The men in action are Peter Rainville, Giulio Giardini, Camille Beauchamp, Jacques Pelland, Vittorio Fabris, and John Martin.

Slabs Bolted in Place

The second picture illustrates the method of connecting the slab to the concrete column. Vittorio Fabris is tightening in position a heavy plate washer which fits into a slot in the slab and is bolted to the column.

In the third picture John Martin is checking the position of the lintel slab with a level while R. Couceiro, mason, is pointing up the joint. Horizontal joints are pointed up with ordinary mason's mortar, but vertical joints are first packed with saturated felt expansion material and then pointed on the outside with flexible caulking compound. By this method the wall can expand and contract without developing cracks in the concrete.

LINES IN PRAISE OF LITTLE BOYS

My heart inclines to little boys—
I like their monkeyshines and noise,
Their strident strutting and their
boasting.
Their predilection, too, for coasting.
On butcher's sawdust, leaves and ice,
I just think little boys are nice.

I like their darling, grimy paws,
Their wobbling faith in Santa Claus,
Their shaggy teeth, their shaggy hair,
Their shining eyes and their despair,
I like their pungent, earthly smell—
I just think little boys are swell.

—Margaret Fishback,

Herald Tribune, New York.

"AS SHE IS SPOKE"

"Are your mother and father in?" asked the teacher when the small boy opened the door.

"They was in," said the boy, "but they is out now."

"They was in! They is out!" exclaimed the teacher. "Where's your grammar?"

"Out in the kitchen making cookies."



Reproduced Picture of Casa Loma From Chips of Old Mine Timbers

When they stripped the old No. 1 shaft at Levack Mine they sold the timbers to the local citizens at a nominal price for firewood. And as he chopped his pile of kindling each day Alec Affi noticed the unusual color effects produced in the wood by the chemical action of the mine water during the years since the shaft was sunk. He got the habit of tossing to one side bits which were particularly attractive in color.

When Mrs. Affi returned from a trip to Toronto she brought along a souvenir booklet of historic Casa Loma, in which there was an artist's sketch of the castle. Alec saw it, thought of his collection of colored wood, and knew he had a hobby job to do.

When Patience is Vital

Working with a jack-knife, a pot of glue, and his daughter Julia's eyebrow tweezers, Alec painstakingly reproduced the view of Casa Loma from chips of the old mine timbers. The finished job is seen on the left in the above photograph. It contains 2,487 bits of wood, of some 14 different varieties, and it took him two months of evenings to complete. He even put the cloud effects in the sky with the colored wood. Sandpapered down and trimmed around the edges, the novel creation is something anybody would be pleased and proud to own.

Alec is a dyed-in-the-wool lobbyist. He has made several fine models of ships. The one shown above, a model of the famous clipper Thermopylae which sailed the seven seas from 1866 to 1907, he put together while he was at Garson Mine. He has also done several oil paintings of unusual merit.

Now construction foreman at Levack, Alec started with Inco at Creighton in 1918 when they were sinking No. 3 shaft. He has also worked at Frood. He was born in Finland and was a sailor before he got into the mining game.

TAKE IT EASY, BUD!

Two sailors had been adrift on a raft for days when one, losing all hope of rescue, knelt in prayer.

"Oh, Lord," he moaned, "I've led a worthless life, I've drunk to excess, I've been mean to my wife and I've neglected my children. But if you save me from this, I promise . . ."

"Hold it, Jess," interrupted his companion. "Don't promise anything drastic. I think I see land."

The Port Colborne Picture



The print selected this month is a portrait of Mary McKeellar, taken by Jack Leach, president of the Port Colborne Camera Club for 1948-50. It was exposed on Super xx film, 1/5 of a second at F. 16 and printed on Chlorobromide Opal paper.

A portrait was chosen this time, to illustrate one of the most difficult branches of photography; it is difficult to secure satisfactory photographic results and often difficult to please the subject. This particular print was considered to be one of the better portraits submitted during the year.

The lighting was handled with two No. 1 photofloods and a photospot for backlighting; one photoflood at a 45° angle above and to the right of the figure, one photoflood as a fill-in light at the camera to eliminate heavy shadows on the face, and the photospot for backlighting on the hair. A piece of grey

cardboard was used for background.

Composition and print quality are good, with a satisfactory range of tones from pure white to black. Whites of the eyes might have been improved if slightly lighter and highlights lightened with a touch of ferricyanide. The rather heavy shadow on the lower lip could also have been eliminated by moving the photoflood on the right, slightly forward. On the whole it is a good effort.

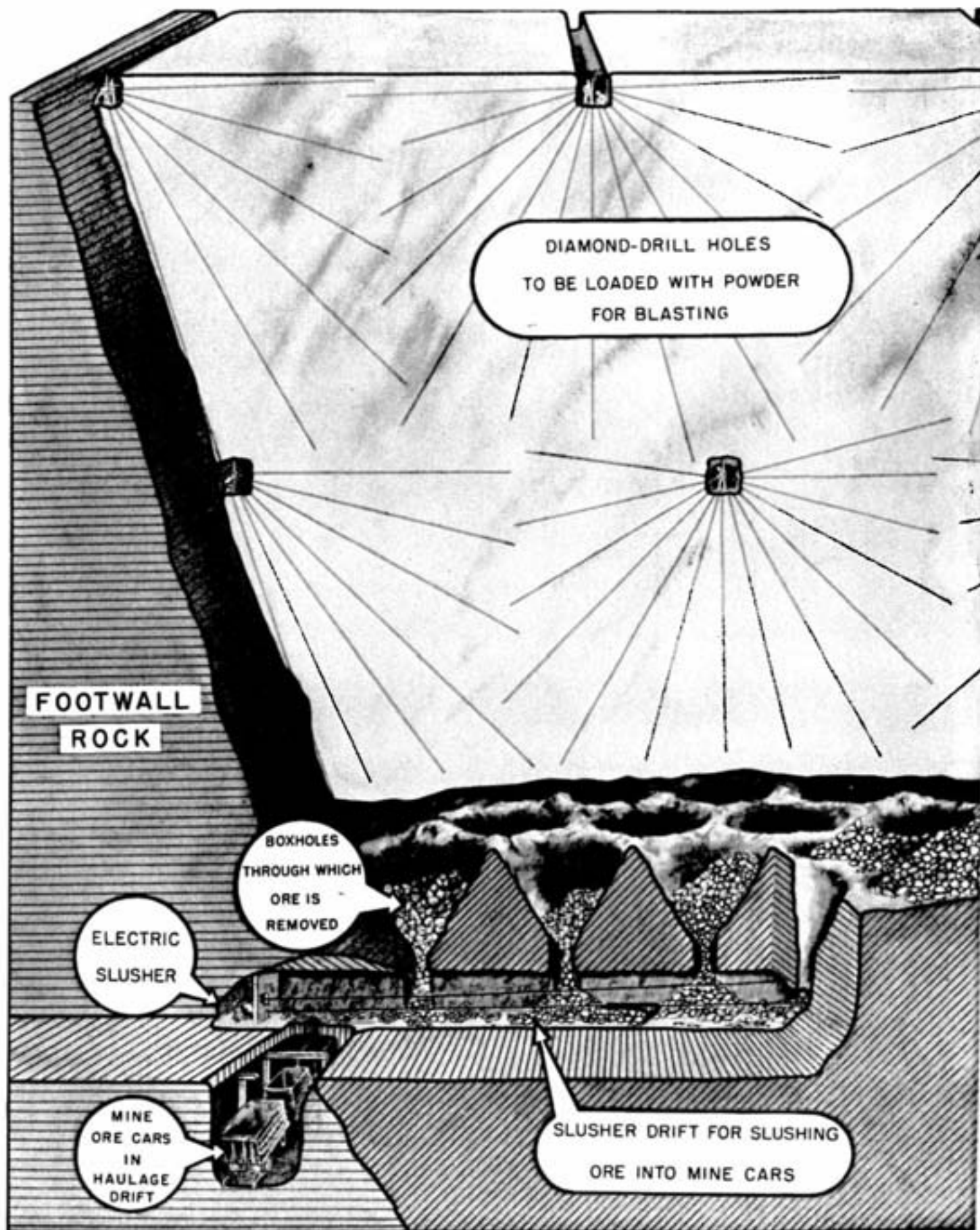
The 1948-49 season of the Camera Club has been concluded and Club members wish to express their appreciation for the opportunity of having their work appear in Triangle and hope that it has been of interest. When activities are resumed in September, perhaps the series can be continued.

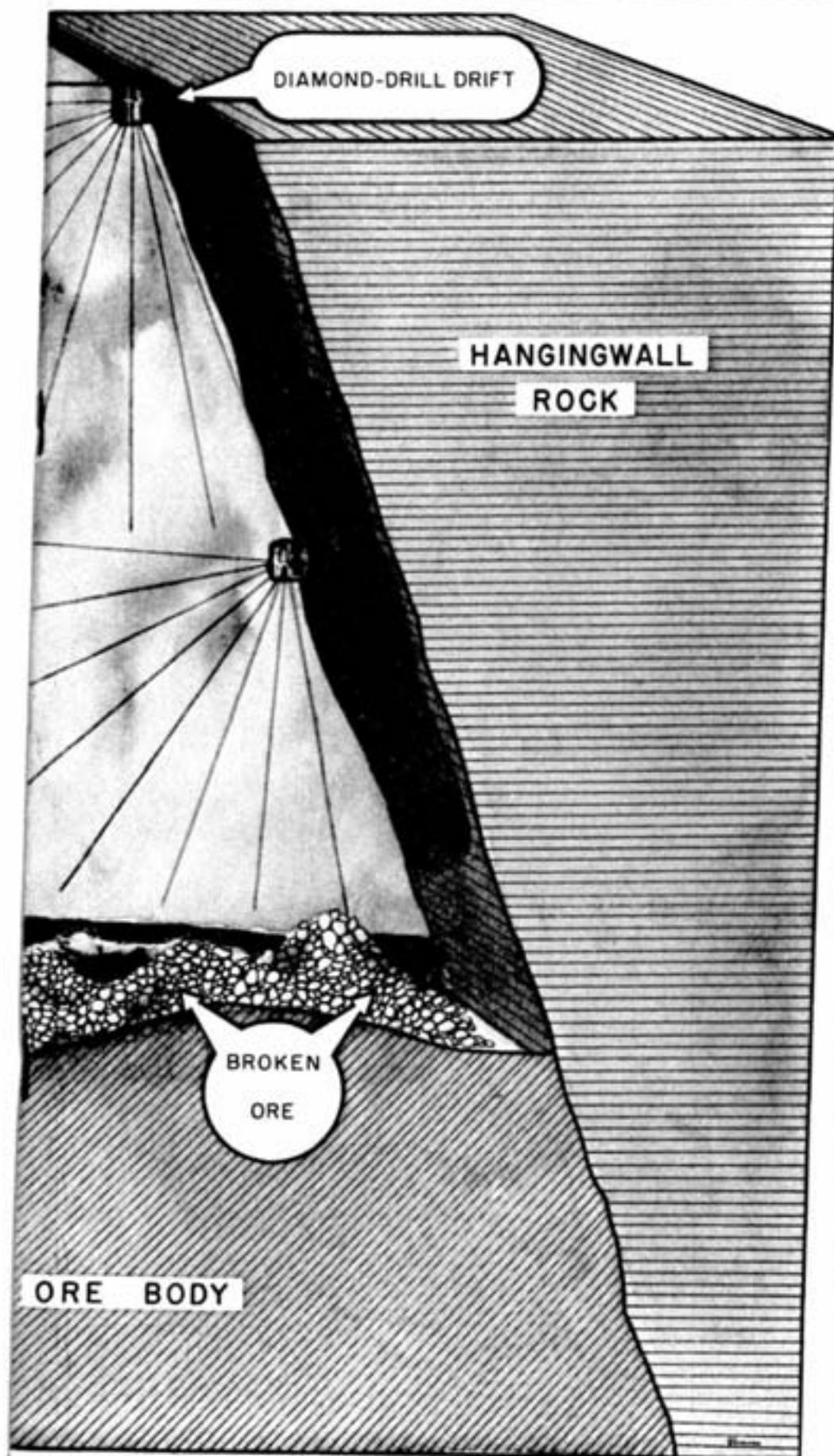
—J. H. W.

Doug and Frank



Out in the sinter plant at Copper Cliff Doug Brunton doesn't very often see eye to eye with Frank Martin, mainly because he has to stand on a chair to do it. Otherwise the two are close chums and take a lot of good-natured ribbing about the difference in their height. Frank is 6 feet 5½ inches without shoes; he is 30 years old, came to Inco from the British West Indies about a year ago, likes it fine. Doug was born in Timmins 22 years ago, has been with the Company more than a year and a half, and expects to get married in July.





Extending Use Of Blast Hole Mining Method

Although it has been used at Levack Mine since 1939, and more recently at Creighton and Garson, the blast hole method of mining is not familiar to the majority of Inco workers. Now that it is being adopted for sections of Froid-Stobie and Murray Mines, interest in this technique is steadily increasing.

Blast hole mining is an efficient and economical method used in large ore bodies where ground conditions are suitable. Several variations of the method have been developed to suit the size and shape of the ore body and of the section to be mined. With the able assistance of Orest Andrews, special illustrator for the Safety Dept., who drew the fine cut-away sketch on the left, the Triangle will describe the operation.

Haulage Drifts First

Considerable development work is required to prepare the stope or section for blast hole mining. The first step is to drive the main haulage drifts at the regular level elevations the full length of the ore body to be mined. These drifts are placed in the footwall rock close to the ore body.

The next step is to drive slusher drifts across the ore body from footwall to hangingwall at 70-foot intervals beneath the section to be mined. In this case the ore is 200 feet wide, the section is 150 feet high and 200 feet long and contains approximately 600,000 tons of ore. The slusher drifts are placed just above the haulage drifts and at right angles to them. The "king size" electric slusher installed in these drifts moves between 250 and 300 tons in a shift, and was pictured in the April issue of the Triangle.

Boxholes are then driven up to the undercut elevation and are belled out at the top so that they almost completely undercut the section of the ore body to be mined and form funnels through which the broken ore will pass down to the slusher drifts.

The ribs of ore remaining around the edges of the boxholes on the undercut elevation are blasted out in advance of the stope mining. This removes the support from the bottom and allows the broken ore to fall freely into the belled-out boxholes.

Next step is to drive diamond-drill drifts on the level above the section as well as on the sub-level midway down to the undercut. The drifts are driven at the footwall and at the hangingwall at each of these elevations, plus as many in between as will be necessary for drilling the full width of the ore body. The diamond-drill drifts run the full length of the stope. Those on the level above are driven from the main haulage drift but those on the sub-level are opened from the service raise driven in the pillar opposite the end of the stope section at which mining commences; a 75-foot pillar is left between all mining sections for support. These are mined by the same method when the stopes are completed.

Now, at the end of the section where mining is to commence, 11-foot cross-drifts are driven from footwall to hangingwall, one on the level above the stope section and one on the sub-level connecting the diamond-drill drifts. This accomplished, the section is ready for mining.

Opening The Slot

First step is to open up a mining face from which the ore may be sliced off by

(Continued on Page 10)



Use Specially Constructed Drills

Here's a diamond-drill setup for the blast hole method of mining described on Pages 8 and 9. The drill is specially constructed for short hole work, and weighs 160 lbs. as compared with types formerly used on this work weighing upwards of 350 lbs. The picture was made at Creighton Mine and the drill runner is Gerry Giovanetti.

Blast Hole Mining

(Continued from Page 9)

drilling and blasting, and this is done by cutting a slice 11 feet thick off the end of the stope section the full height of the stope, in the following manner. From the top of the boxholes, at the undercut, a 7 by 11-foot raise is driven straight up to intersect the 11-foot cross-drifts connecting the footwall and hangingwall diamond-drill drifts, on both the sub-level and the level above the stope. Then on each side of the raise at the connecting drifts rows of three vertical down-holes are drilled by diamond drills at four-foot intervals from footwall to hangingwall. Those from the level are drilled down to the sub-level, and those from the sub-level down to the undercut. These holes are usually drilled and blasted two rows at a time on each level to maintain a vertical face from top to bottom of the stope. The ribs of ore between the boxholes at the

undercut are blasted at the same time. The operation continues to the full width of the stope, until an 11-foot slot is opened up from footwall to hangingwall and from undercut to the level above. The broken ore passes through the boxholes and is scraped by the powerful big slusher into mine cars spotted in the haulage drift below.

Then, from each diamond-drill drift, as mining of the section gets into high gear, a ring of holes is drilled as illustrated. The pattern of the rings is laid out by the Mines Engineering Dept. on the basis of the amount of powder required for proper fragmentation of the ore. The rings are all on the same plane and are drilled at five-foot intervals. About two tons of powder is required to load the holes in one set of rings for blasting a slice 5 feet thick from the complete face of the stope. As many as three sets of rings may be blasted simultaneously, thus removing a slice 15 feet thick and, in this instance, containing 45,000 tons of ore. The artist's clever cut-away sketch illustrates the stope after several sets of rings have been drilled and blasted.

Leather-Throwing Spree Now Annual Nickel Belt Thrill

Men, it looks as if boxing has come to stay. Knighthood is in cauliflower.

With a large entry list and the leather-lunged encouragement of almost 1,500 fans, the Nickel Belt boxing championship tournament at Inco Employees' Club in Sudbury was an unqualified success, and could safely be marked down as an annual "must".

Nels Beaudry, fighting for the new Northland Boxing Club, was the star of the show, winning titles in both welterweight and middleweight divisions. Digger McEwen of Falconbridge and Bob Bastien of Inco Club were also much in the limelight during the final evening's blood-letting.

Results of the final matches:

Paperweight—Hector Chevette (Inco) beat Jackie Houle (Shamrocks). Decision.

Flyweight—Lloyd Houle (Inco) beat Johnny Healy (Shamrock). Decision.

Lightweight (novice)—Rolly Weber (Northland) knocked out Johnny Gibson (Northland) 1:40 1st.

Welterweight—Nels Beaudry (Northland) beat Dunc Yates (Shamrocks). Decision.

Featherweight—Rene Lepage (Northland) knocked out Rene Leduc (Inco) 1:30 2nd.

Welterweight (novice)—Ernie Chenier (Creighton) beat Sleepy Williams (Inco). Decision.

Middleweight (novice)—Bob Bastien (Inco)

beat Rolly Tellefer (Shamrocks). Decision.

Lightweight—Henri Fortin (Northland)

beat Norm Whissel (Inco). Decision.

Light heavyweight—Digger McEwen (Falconbridge) beat Joe Burgess (Northland). Decision.

Middleweight—Nels Beaudry (Northland) knocked out Joe Gilebe (Creighton) 0:28 1st.

Officials

Referee, Squint Falconi; judges, Dr. Wootten, Clark Phillips and Bill Young; timekeeper, Jerry Mahon; promoter, Henry Dunn.



Champs At the annual variety party at the Copper Cliff Club the Lambert Trophy was presented to the winning team in the 5-pin bowling league, seen above: seated, Mrs. R. A. Elliott and Mrs. Cecil Coe; standing, Cecil Coe and R. A. Elliott.



HOW IS YOUR BRAIN-POWER?

Of course there were a lot of people who got the right answer and just didn't bother to send it in, but the rather astounding fact remains that only one (count 'em, 1) reader submitted the right answer to last month's hair-greier about the big race between Turtle and Swift. We're flabbergasted, puzzle addicts. What in the name of all-get-out happened to all you nimble-witted devotees of the puzzle pastime? And don't give us that "too busy with the garden" stuff, either!

Winner of the pearl-handled toothpick, and as a special prize one lifetime subscription to the Triangle (our life, that is), was Reg Edmunds of Frood-Stobie Machine Shop, who correctly reported that good old Turtle was the winner by one and two-fifths points.

We're going to pass up further comment about the people who didn't send in the right answer, although we tried the darned problem personally and it was so easy we didn't have the solution after only three minutes' figuring, and we'll pass on to the next lesson.

It seems that there's a brain trust out at Murray composed of L. Scott, B. Hines, and G. T. Scully. They cooked up a riddle and submitted it to the regular lunch-time bull session at the mine, and there were a few hungry boys when the whistle blew. The general opinion was that the problem could be worked out easily by trial and error in one hour, from which they deduced that if you use a little elementary arithmetic plus your wife's intuition you might get the answer in 15 minutes. See how it works in your case, and if you don't send us the answer you're a big ass!

May Ball Smart Affair

Not in a long time have we seen an auditorium as beautifully decorated as was the one at Copper Cliff High School for the annual May Ball. It must have taken miles of crepe paper and a bushel of tacks to produce the lovely effect gained by the artistic students' committee. Picture shows a section of the smart-looking crowd which danced to the smooth music of Guy Frattini's band. Presentations were made during the evening to members of the school's hockey and curling teams.

Pillbury Pipsqueak works in an office high up in the Empire State Building. Being a corpulent gentleman and recognizing his need for exercise, Pillbury always shuns riding the elevator on his way home at night and walks down the steps to the street. Also being of a queer nature as his name would indicate, he indulges in all sorts of mental gymnastics on his way down the stairs. (He does not want his head to become as fat as his body.)

Quite accidentally he discovered a queer thing. Counting the steps two at a time he had one left over, counting them three at a time he had two left over, counting them four at a time he had three left over, counting them five at a time he had four left over, counting them six at a time he had five left over and counting them seven at a time he had six left over.

What is the least number of steps that Pillbury Pipsqueak could have walked every day?

GOOD ENGLISH

A professor of English had a very pretty secretary. One day his wife, entering his study unexpectedly found the secretary sitting on his knee.

"Eustace," she said, "I am surprised."

The professor turned round. "No, my dear," he said. "We are surprised! You are astonished."

PRACTICAL YOUNG MAN

Nurse (to eight-year-old boy): Would you like me to show you the nice, cute, little baby the stork brought your mother?

Bobby: Naw! Show me the stork.

Queen's University Honors R. C. Stanley

A honorary degree of Doctor of Laws was conferred upon Robert C. Stanley, chairman of the board of Inco, at the annual convocation at Queen's University on May 21.

In acknowledging the high distinction Mr. Stanley, who is a graduate of Columbia University in Mining, said the mutual respect and confidence he found to exist between Americans and Canadians prevails because of common institutions and ideals even more than common language and common territorial boundary.

He likened the speed with which ideas are now spread to the changes which took place in the methods of warfare between the two world wars.

"We must create improved techniques to cope with a blitz of ideas, to distinguish the good from the bad," he said. "It must be met by leaders in each community without whose support these new ideas cannot be translated into action."

Stressing the advantage to these leaders of university training, he said, "An important part of that training is the development of the critical faculties—the ability to reason, to analyze, to compare, to exercise an informed, independent judgment."

NOT HIS FAULT

Eastern tenderfoot to mounted Indian: "Why do you ride while your wife walks?" "She no gottum pony," grunted the Indian.



Champions Are Declared in Inco Bowling

It's trophy time on the bowling front, and in all the Inco employees' leagues the new champions are picking off their prizes. Hundreds took part in this popular sport during the winter months, and the opinion of the stewards is that the general calibre of play among Incoites has hit a new high.

On the opposite page are photographs of some of the winning teams:

1. Winners of the Athletic Association trophy for the playoffs in the "A" Section of the Froid-Stobie league: left to right, Fred Fiorotto (captain), M. Fluvian, O. Cull, R. Teahan, and B. Hamlin. The Froid Welfare cup for the league championship in this section was won by Albert Stone (captain), Bill Baby, Wally Woolacott, Larry Dube, Jim Kilby, Lou Midgley, and Ralph Brown.

2. Winners of the George Leach trophy for the playoffs in the "B" Section of the Froid-Stobie league: J. Doucett (captain), D. Lavoie, T. Hickey, A. Roy, K. Withers, H. Grenon, and D. Jones. The Athletic Association cup for the league championship in this section was won by Sammy Jones (captain), E. Tremblay, M. Lacourciere, W. Hnativ, L. Therrault, P. Brunelle, and K. Coggins.

3. Winners of the playoffs in the Copper Cliff league: O. Bertulli, A. Didone, Unk Longfellow (captain), Bud Basso, Ray Canapini, and Enio Cammilucci.

Ladies' League Champs

4. The team which copped the Rose Bowl in the ladies' league at the Inco Club: Alice Kilby, Dorothy Hornby, Velma Roy, Mattie McCrea (captain), Lillian Mahon, and Doris McInnes.

5. Winners of the men's major league at Creighton Employees' Club: seated, Bob Seawright (captain); standing, Eddie Mayer, Tooner McLaughlin, Carl Cretzman, George Curry, and Bill Zyma.

6. Seated are the winners of the Creighton ladies' league: Anne Willgos, Sophie Sherbanuk, Marian Behenna, Helen Michel, and Marie Kroll. Standing are three members of the winning lineup in the men's "B" loop, Bill Bigwood, Raymond Davey, and Michael Osika; missing are T. Wallace (captain), W. Osika, S. Anderson, and T. Whiting.

7. Here are four of the players on the championship squad of the Levack ladies' league: Elsie Gudbranson, Camella Shaller, Olga Wawrynszyn, and Julie Kurylo. Missing are Olga Rantis and Ruby McDonald (captain).

8. The champs of the Open Pit league are seen here: Don Smith, Aurel Ducette (captain), John Stripay, Ben Hurd, Eugene Kishynski, and Ken Pollock.

ROYAL FEAST

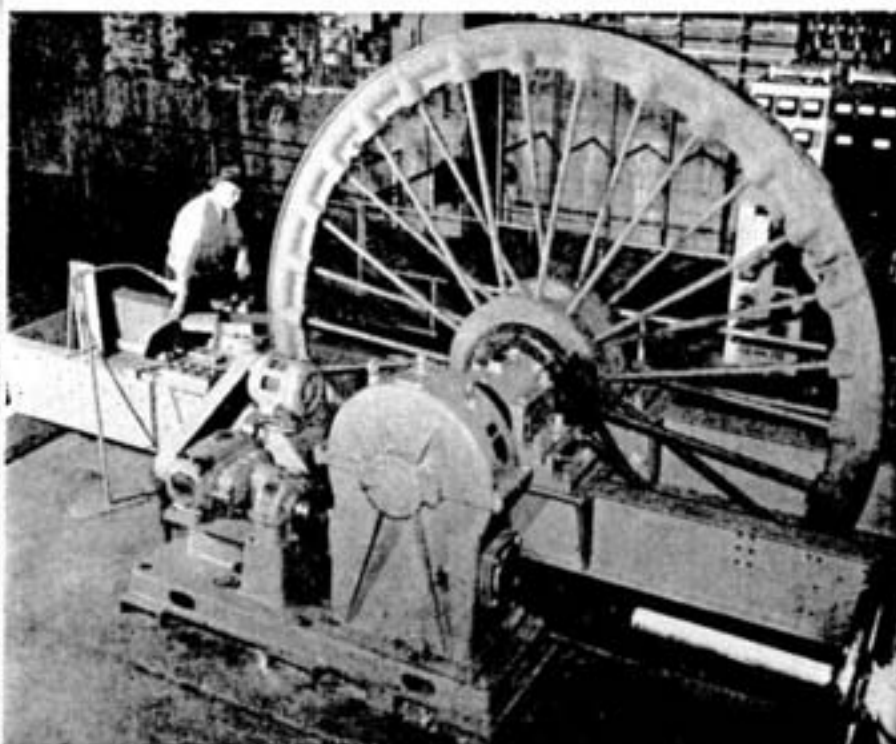
The missionary smiled benevolently on the native tribe around him. "I will cure them all of cannibalism," he said, hopefully, as he retired to his hut.

There he was shortly afterwards joined by a native.

"The King has sent me to dress you for dinner," said the man.

"Ah," smiled the missionary. "How thoughtful of him! You are the royal valet, I suppose?"

"No," replied the native, "I'm the royal cook!"



Longer Life for Mine Hoisting Ropes After Head Sheaves Get This "Toni"

High up in a mine headframe are the head sheaves, or wheels, over which the hoist ropes travel when skips and cages are being raised and lowered in the shaft. In the course of time the bottom of the deep groove in a head sheave wears and narrows so that it commences to pinch the hoisting rope. The Mines Mechanical Dept. has come up with an answer to this problem which promises a substantial increase in the life of the rope.

A specially constructed lathe, pictured above, has been built which machines the groove to its original contour. Now set up in Froid-Stobie No. 7 shaft powerhouse for its trial run, the lathe will later be permanently located in the machine shop at Froid-Stobie No. 3 shaft and the head sheaves from all Inco mines will be brought to it regularly for a Toni.

New To The Industry

The new lathe is an innovation in the mining industry. The operation has been done by machining sheaves in place in the headframe, but due to the heavy deposit of rope dressing, proper cleaning was expensive and the finished job not satisfactory.

Operator of the lathe on its trial run was Jim Miles, Froid-Stobie Open Pits master mechanic, and the outfit behaved beautifully under his expert attention. Sitting there watching it work is a sad kind of a job, though, Jim says. The big sheaves, 12 and 14 feet in diameter, turn so slowly they make him think of the horses he always manages to pick when he goes to the races at Toronto, and the lathe tool, barely grazing the surface of the groove, reminds him of the way he tops his iron shots on the golf course.

MONOTONOUS LIFE

"It says here in the newspaper," said the old gentleman, "that a man is run over in New York every half hour."

"Dear me!" said the old lady. "The poor fellow!"

FAMILY MEETING

We are all here,
Father, mother,
Sister, brother,

All who hold each other dear,
Each chair is filled, we are all at home!
Tonight let no cold stranger come;
It is not often thus around
Our old familiar hearth we're found.
Bless, then, the meeting and the spot,
For once be every care forgot;
Let gentle peace assert her power,
And kind affection rule the hour.

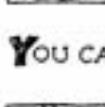
We're all—all here.

—Charles Sprague.

YOU CAN BE TOO THIN



YOU CAN BE TOO FAT



YOU CAN BE TOO RICH



YOU CAN BE TOO POOR

**BUT—
YOU CAN'T BE TOO
CAREFUL**

A Project at Creighton School

One of the things Miss Ursula Black saw on her trip to New York at Easter was a puppet show at the Roxy Theatre. When she told the Grades 9-10 class at Creighton School about it they promptly selected it as a project and went to work.

They made the stage, the puppets, and the miniature furniture. What's more, although that tricky ability to manipulate marionettes is supposed to be a gift of the gods, passed on from generation to generation only by the seventh son under a full moon, those kids mastered it in a couple of weeks. Then they put on their show.

The small children came to see it in the afternoon, and the adults came in the evening, and there was a silver collection instead of a fixed admission in case anybody felt like giving a little extra.

Week-End Trip To Sault

With the proceeds of the show plus what they picked up at a bake sale and in sundry other activities, this enterprising class took off on an educational week-end trip to Sault Ste. Marie. Miss Black was the chaperone, accompanied by Miss Theresa Foley, the exchange teacher from Monmouthshire, England, who is on the staff of Copper Cliff Public School this term. They visited Algoma Steel, the Locks, the Fish Hatchery, the Memorial Gardens, the Michigan Sault, and even went out and took a look at Lake Superior. They stayed in cabins, bought crazy souvenirs, ate unmentionable quantities of assorted foods, and generally had the time of their lives. All in all it was quite a do.

Members of the class who took part in staging the puppet show were Bill Mulligan (narrator), John Pezzetti (the class president), Jeanine Barbe, Arthur Chevier, Delores Brooks, Frances Tremblay, Tom Stefanko, John Henry MacDonnell, Jim Pentney, Richard Brooks (properties) and Gerry Gotro (chairman). They were coached and assisted by their art teacher, Miss Ellen Tierney.

There were no less than four very clever acts in the performance. Blanchard's Trousers, The Light Went Out, The Intractable Case, and a furious piano recital by Handel's step-brother, Monsieur Doorknob.

Perhaps the funniest was this piano exhibition, in which music-mad Doorknob jounced all over the place as he hammered the ivories. When he broke into boogie (via the school's loud-speaker hookup) Mr. and Mrs. Blanchard stepped into the act and cut a fancy rug. First of the accompanying pictures was made during this act.

A Tough Session for Blanche

No less amusing was the piece about Blanchard and his Trousers, dramatized by the class from this term's literature lessons. Poor old Blanchard begs the women of his house, in turn, to shorten a pair of pants he bought at the store. Unknown to the others, each obliges him. The net result is pretty grim for Blanche. A scene from this harrowing domestic trial is portrayed in the second picture.

In the third picture, taken backstage, four of the young artists are seen as they skillfully manipulate the strings to make the little figures come to life on the tiny stage below them. From left to right are John Pezzetti, Tom Stefanko, Delores Brooks, and Jeanine Barbe.



"And how is your husband getting on with his reducing diet?"

"You'd be surprised—that battleship he had tattooed on his chest is now only a rowboat."

Nurse: "It's a boy!"

Sultan: "Curses—I wanted a girl."

Nurse: "Be patient, oh, King. There will be three more this afternoon."

Six Teams in Soccer Setup



Bill Gaylor of the Frood-Stobie engineering staff swings a wicked hoof on the soccer field. Picture shows him letting go with the first penalty kick of the 1949 season in an exhibition game between Garson Gunners and Ryan Club, which Garson won 6-2.

Bill came to the Nickel Belt from Montreal in 1935 to line up with Jock Jardine's Donovan Dusters, lined up with Frood the following season, and this year, with Frood not entered, plays full back for the new Ryan eleven. Due in no small measure to Bill's unflagging zeal is the six-team league which opens its schedule on June 6. After long lean years when there was either no league at all or else only two or three teams, the six-club kick-off is the realization of fond dreams for Bill and a few others who have worked unceasingly to keep the grand game alive in this district.

Caruso Club, Polish Eagles, Mine-Mill and Creighton are the other four lineups entered in this year's soccer setup. Many recently arrived D.P.'s, some of them top-notch players, have been signed up.

The league will continue its fine missionary work among young players, organizing and coaching the boys in the fine points of the game with a view to building a player pool for the future.

Garson Gunners will carry the good name of the Nickel Belt into the Dominion Cup matches this year, and have drawn a bye in the first round. This is the first time in more than 10 years that a local team has competed in the Dominion Cup.

SCHOLARSHIPS PRESENTED

At Sudbury Mining and Technical School's commencement ball the annual Inco Scholarships of \$50.00 each were presented on behalf of the Company by I. J. Simcox, general assistant to the vice-president, to Dean Muncaster, Grade IX, Peter Evans, Grade X, Alex Romanuk, Grade XI, and John Kovalchuk, Grade XII. The Inco scholarships are awarded to the boy with the highest standing in each year of the mining course.



Port Colborne's Bowling Stars

Here are the winners of the bowling leagues at the Nickel Refinery Recreation Club, Port Colborne: (1) Champs of the men's 5-pin section, John Rogers, Eric Minor, Jack Ridgwood, Don Chisholm, Bob Duke, Martin Pongratz, (missing Norm Newberry); (2) champs of the men's 10-pin loop, John Donatis, Wilf Thompson, Steve Kovachich, Leo Julian, and Bob Anderson; (3) winners of the mixed league, Mr. and Mrs. Henry Boyer and Mr. and Mrs. Walter Kozar.

NOTHING BUT THE BEST

A man at a private beach left his wife alone for a few minutes. When he came back he saw a crowd of excited people gathering at the water's edge.

Man (to one standing near) — What's the matter?

Spectator — They just pulled someone out of the water.

The man investigated and found that the

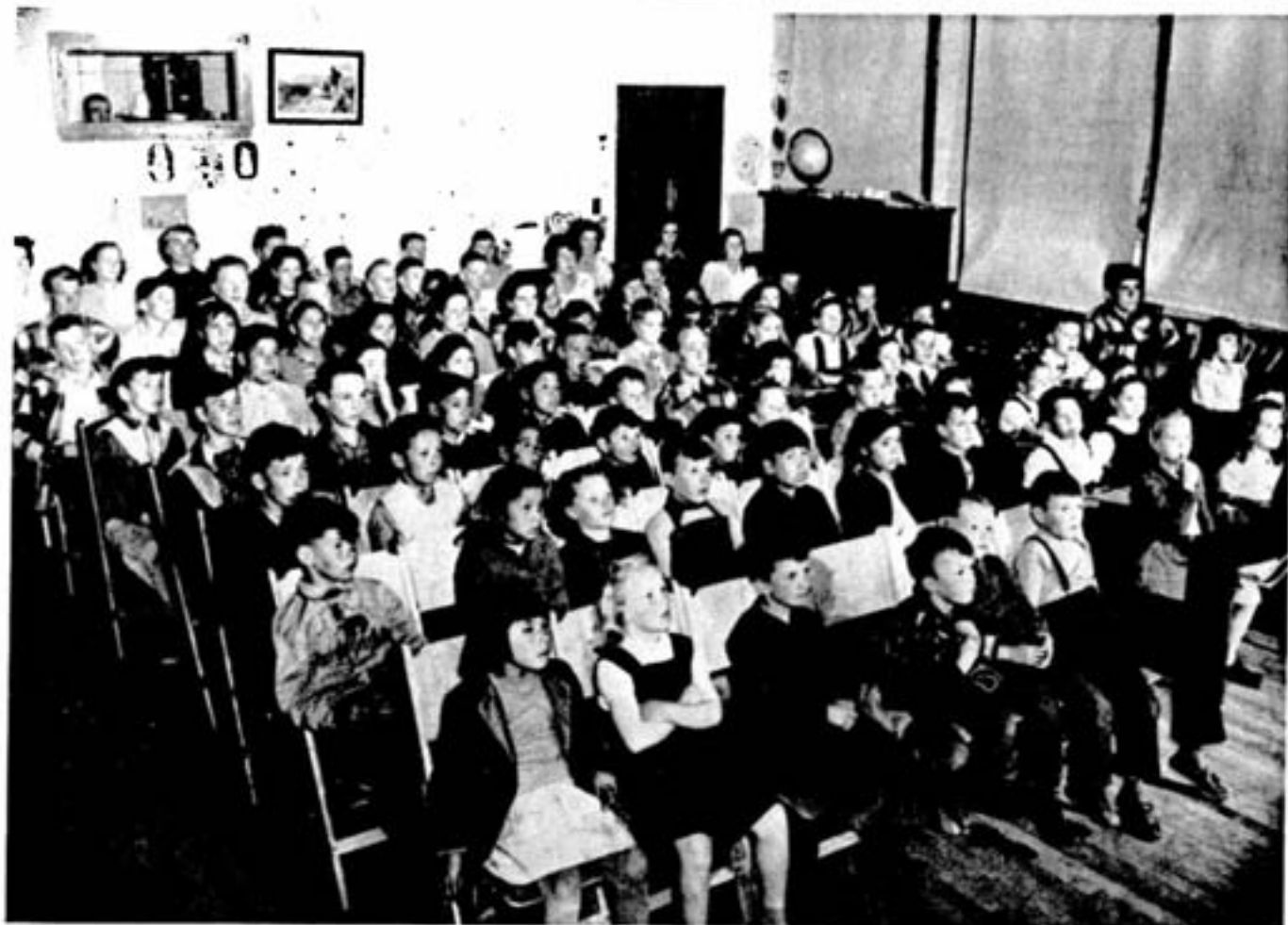
rescued party was his wife.

Man—What are you doing to her?

Life Saver—We are giving her artificial respiration.

Man (screaming)—Artificial? Give her the real thing! I'll pay for it!

The largest group of telephone circuits in Canada runs between Toronto and Hamilton.



Friday Afternoon Movie Audience at Willisville

Scene during one of the regular Friday afternoon shows at Willisville school, when the Willisville youngsters are hosts to the kiddies from the Anglican Mission School at Whitefish Falls. Movie shorts are provided by the provincial Dept. of Education, and are immensely popular. In the evening the grown-ups see regular Hollywood releases and go for Westerns just like everybody else. You get a glimpse of Supt. Jack McAndrew of Lawson Quarry in the little projection booth they built at the back of the schoolroom.

Real Boon to Community

As an educational medium for the children, and also a means of entertainment for the little community during the snow-bound months, Willisville School Board last winter went out on the limb and bought a movie outfit.

The first film they showed to the community was "It Shouldn't Happen to a Dog", and Supt. Jack McAndrew of Lawson Quarry and his fellow movie-magnates have sometimes wondered if that isn't true, especially when the projector goes on the blink.

Every Friday afternoon there's a show for the school children. The Willisville pupils are joined for this big event by the kiddies from the Anglican Mission School at Whitefish Falls, about two miles away. The bigger Whitefish children hike it up the highway and the little ones get a ride over in the Stump and Spry truck. You don't really appreciate a treat until you've seen how those youngsters enjoy the Dept. of Education's film releases. And you mentally congratulate the fellow who thought of sending such splendid tuition out to the classrooms on a celluloid strip. The titles are chosen

by the Willisville teacher, Mrs. Lorna Bois.

Jack McAndrew, who is chairman of the school board, usually runs the educational movie himself, but in the evenings he shares projectionist duties with Cam McLean. Bill Tilston is secretary and sells the tickets for the night shows, and Austin Stephens is usher.

Westerns Take The Cake

Those good old Westerns are heavy favorites at the night shows. Trail of Vengeance, with Johnny Mack Brown, recently played the Willisville theatre and drew a record audience of 135 people to the schoolhouse. Hopalong Cassidy is sure draw too. Other films they've recently had up that way are Johnny Comes Flying Home, Sun Valley Serenade, and Bells of St. Mary's.

Sean Andrews and the rest of the Sudbury theatre boys will moan with envy when they hear what Willisville has to lay out for advertising. Posters announcing the coming pictures cost four cents each, and it takes four of them to spread the glad tidings over the countryside, two for the stores at Whitefish, one in Willisville, and one at the quarry; net expense: 16 cents.

Cash profits from the enterprise are being saved up to buy athletic equipment for the school children; the other profits, like happy hours of entertainment, can't be reckoned in dollars and cents but they mean a great deal to the people in Willisville.

High Recognition to Two Inco Scientists

Among the special awards conferred at the annual dinner of the Canadian Institute of Mining and Metallurgy in Montreal on May 26, for distinguished contributions to the sciences, were those of the Inco Medal to J. R. Gordon, assistant vice-president of International Nickel, and the Barlow Medal to Arthur B. Yates, Inco chief geologist. This high recognition of two outstanding men was received with keen satisfaction by all their friends and associates in the Company.

Dr. Yates, who flew from South Africa for the occasion, was prevented from accepting his award by illness which forced his confinement in Royal Victoria Hospital shortly after his arrival in Montreal. Everyone who knew him was deeply shocked and grieved by his untimely death on May 10, in his 48th year. After a brilliant scholastic career culminating in master's and doctor's degrees in geology and mining engineering from Harvard at the age of 30, he joined Inco at Copper Cliff. He had been widely honored in scientific and mining circles.