



VOLUME 17

COPPER CLIFF, ONTARIO, MARCH, 1958

NUMBER 12



A Dream Comes True

(STORY ON PAGE 13)



Published for all employees of The International Nickel Company of Canada, Limited.

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Editorial Office Copper Cliff, Ont.

Authorized as second class mail, Post Office Department, Ottawa.

Inco Operated at Capacity for 8th Consecutive Year

The International Nickel Company in 1957 operated at capacity for the eighth consecutive year, according to the annual report to the shareholders issued by John F. Thompson, chairman of the board, and Henry S. Wingate, president.

Pushing to increase the Company's annual nickel-producing capacity to 385,000,000 in 1961, full-scale development and construction work is progressing on schedule at its new nickel project in Manitoba and long-range development of its operating mines in the Sudbury District of Ontario is continuing, the report stated.

Deliveries of Metals

Deliveries of nickel in all forms in 1957 amounted to 290,050,000 pounds, compared with 286,140,000 pounds in 1956. Refined copper deliveries were 280,810,000 pounds, compared with 271,300,000 pounds in the previous year. Deliveries of platinum metals — platinum, palladium, rhodium, ruthenium and iridium — declined about nine per cent to 339,400 ounces, while cobalt deliveries rose to a new high at 2,400,000 pounds. Deliveries of iron ore, also recovered from the Company's Sudbury ores, amounted to 113,000 long tons, compared with 71,000 long tons in 1956.

1957 Turning Point for nickel

"The year 1957 marked a turning point for nickel," the report stated. "During the latter part of the year the supply of nickel, after meeting defence requirements, exceeded civilian demand for the first time since the Korean War began in 1950. A still larger supply was in sight for 1958 and even more abundant supplies could be anticipated thereafter because of substantially increased free world nickel-producing capacity. As a consequence of these developments, the use of nickel by civilian industry can once again be governed exclusively by technical and economic considerations."

The turn-about in the supply-demand situation for nickel resulted from a number of factors. Free world nickel supplies during the year rose to approximately 490,000,000 pounds, an increase of 40,000,000 pounds over the previous high reached in 1956. Defence demands for nickel were substantially reduced, and much of the nickel under contract for delivery to the United States Government stockpile was released to industry. As a result, by the end of 1957 the supply of nickel was more than sufficient to meet the demand.

In the United States, the principal



Etched against a cloudless sky these clean-limbed birch trees in Bell Park, Sudbury, seem to symbolize the eternal hope and promise of Spring as they reach toward the warming sun.

market, nickel deliveries exceeded total civilian and defence consumption by an estimated 50,000,000 pounds. Unconsumed nickel remained in consumers' inventories, which rose to a record high; and in accumulations in the hands of the United States Government, resulting from industry's inability to take nickel which had been offered by the Government to the trade instead of being stockpiled.

In Europe, the second largest market for nickel, demand for the metal during 1957 was in general in excess of supply, but by year-end the gap had been virtually eliminated as a result of increased deliveries by producers, as well as releases from the strategic reserves of the United Kingdom Government for distribution in that country.

During the latter part of 1957 the Company put into effect previously developed plans to sell its nickel under conditions of abundant supply. These plans include intensified sales, research and promotion activities designed to develop larger markets for nickel and its alloys.

Manitoba Project Progresses

Full-scale development and construction work progressed on schedule during the year at the Company's new nickel project in Manitoba, where it is opening underground mining operations and is building a mill, a smelter and a refinery, as well as a town for a population of 8,000.

In their remarks concerning the Manitoba project, chairman Thompson and president Wingate said in part: "A force of up to 1,000 men was engaged during the year in developing the Manitoba project, announced to shareholders a year ago, into the world's second largest source of nickel supply. It was possible to carry on full-scale construction during the entire year because of the availability of 30,000

tons of material and supplies transported into the property by tractor train during the winter months of early 1957.

"Favorable progress in the exploration program at the Thompson mine resulted in a decision to bring this property into production first. In consequence, the Manitoba project's entire scheduled output of 75,000,000 pounds of nickel per year will come initially from the Thompson mine.

"On October 20, 1957, the last spike was driven on the 30-mile branch line which joins Thompson

with the Canadian National Railway's Hudson Bay line."

The 1,057-foot development shaft of the Thompson mine was completed shortly after the end of the year. Sinking of the production shaft, which will reach a depth of 2,100 feet, was proceeding on schedule and will be completed in the autumn. Development work was also carried on at the Moak Lake mine.

Ore Production and Reserves

Total ore mined from the Company's mines in the Sudbury district was the largest yet achieved, exceeding 16,000,000 tons for the first time, compared with 15,500,000 tons in 1956. Proven ore reserves, exclusive of Manitoba, at December 31, 1957, stood at a high of 264,495,000 short tons. This compared with 264,224,000 short tons at the end of 1956. The nickel-copper content of these reserves also showed an increase.

Exploration

Exploration expenditures in 1957 amounted to \$8,948,000, compared with \$8,247,000 in 1956. In both years approximately one-half of the expenditures was for exploration work in Manitoba.

Large expenditures were also made in the Sudbury district, where the systematic investigation of the extensions of ore zones and favorable structures was continued from both surface and underground, with satisfactory results.

Tests of the ore possibilities were continued in the area which includes the Company's Coppermine River concession in the Northwest Territories. Substantial exploratory programs were also conducted in Saskatchewan, Quebec, and Australia. Property examinations were made in Africa, the East Indies, the West Indies and elsewhere.

Capital Expenditures

Capital expenditures of \$43,921,000 in 1957 were the highest for any year in the Company's history

(Continued on Page 11)

Mr. and Mrs. Parker Farewelled by Friends



After residing in the Nickel Belt for nearly 30 years, 23 of them in Copper Cliff, Mr. and Mrs. Ralph D. Parker have moved to Toronto, where Mr. Parker now makes his headquarters as vice-president in charge of Inco's Canadian operations. Prior to their departure they were honored at a gathering of friends at the Copper Cliff Club. In the above picture Mrs. Parker is seen unwrapping a gift of vases presented to her and her distinguished husband by Mrs. G. A. Harcourt, who stands just behind her. R. H. Waddington, shown on the right, expressed the general regret felt in the Sudbury district at the departure of Mr. and Mrs. Parker.



Aubrey Wright, veteran of the Cottrell plant at Copper Cliff smelter, with Mrs. Wright and their four sons, Merrill, 18, Barry, 22, Briane, 15, and Stuart, 13.



From Coniston this month we have Mr. and Mrs. Pete Davis and their fine family: back row, left to right, Gabrielle (Mrs. Cyril Desloges, Coniston), Joseph (who is employed on the nickel reverberatory furnaces at Copper Cliff), Gerald (who works at the iron ore plant), Verna (Mrs. Roger Sarazin of Coniston) and Father; front row, May, 14, Germaine (Mrs. C. Morin, Sudbury), Mother, Shirley, 17, and Stephen, 12.



Mr. and Mrs. Ken Stone, Garson, with Deborah Jean, 3½ (her doll's name is Judy) and Kenneth John, 8½ months. Ken is an electrician at Garson mine.



Here's Jack Cunningham of the nickel refining division at Port Colborne with his attractive wife and their children, Deborah Lynn, 2½, and Richard, 4.

Lawson Quarry is represented by Mr. and Mrs. Jack Kilby with Cathy, 5, and Brian, 8. They live in Willisville.



Mr. and Mrs. Doug Marshall of New Sudbury with Maureen, 18 on March 31, Vivian, 15, Beverley, 4, and Debra, 4 months. Doug is a shift boss at Stobie mine.



Cute little Irene, 16 months, stepped to front centre for this picture of the Caetan Albert family. Her brothers are Gilles, 3, and Raymond, 5. Caetan works in the tankhouse at the copper refinery.



Bill Ferby of Creighton mine came to Inco from Drumheller, Alberta, in 1950. Here he is with his wife and their kiddies, Sharon, 11, Janice, 5, Michele, 4, and Olga, 2. They live in Lively.



After the brawl: sinter plant shift boss Lou Scanlon accepts the Allan cup from metallurgical shift boss Lawrence Brooks while coach Stu Dempsey beams approval. Lou's hirsute camouflage is a friendly take-off on Stu's full-time foliage. Members of the Maroons shown are Danny McArthur, Omer Leroux, Ernie Foucault, Ron Terry, Bob Udall, Pat Hickey, Art Harvey, Fern Gravelle, Jack Hickey and goalie Louis Rossi.

Annual Hockey Feud Settled(?)

Emblematic of senior hockey supremacy in Canada is the Allan cup, but in the Copper Cliff sinter plant it's the "Allen" cup, a familiarly shaped object reminiscent of earlier, less complicated times.

One of the better inter-department sporting feuds, this annual hockey battle between the sinter plant Maroons and the metallurgical Pulverizers is a real humdinger with the vanquished not only losing the prized trophy but also providing refreshments for the victors. The Maroons came up with their first win this year, slapping home two third-period goals to give them a 6 to 4 edge.

Stu Dempsey looked after the coaching chores for the Maroons, ably assisted by Lou Scanlon who also conducted a real roarin' routin' section. Ross Crapper and Harvey Markwart were for the

Pulverizers, with Lawrence Brooks giving vocal support.

A second Albani, Maroons' goalie Louis Rossi was outstanding, and most Pulverizers agreed he gave his mates their margin of victory.

Ernie Foucault, who played a great game on defense for the Maroons, was the surprise of the match. Last year he could barely skate, but, deciding he wanted to play hockey, he bought the necessary gear, haunted any piece of ice he could find, and in one year made himself a good skater and an effective hockey player.

While the boys do play the odd game of hockey for fun they are not organized, claiming they are not expert enough for the plant shift league. There are many who will argue this point after seeing them in action.

Their one big game, and for some their only game of the year, is this

Win Inco Awards at Sudbury "Tech"



Four keen young Canadians received cash awards from Inco for high scholastic achievement at the annual commencement exercises of Sudbury Mining and Technical School. Picture shows R. J. Crawford, the Company's director of technical personnel, with the four winners, Gunter Schatz, grade 10; Eugene Paulauskas, grade 11, Allan Campbell, grade 12; Leslie Foreman, grade 9. The awards are presented annually.

Allen cup special. For two hours at Stanley stadium they go at it, all out, earning a very large A for effort. Next day's aching muscles are part of the fun.

Last season the metallurgical boys won the trophy, and now are just waiting till next season when they vow the hallowed receptacle will again return to its rightful spot.

PLATINUM JET REIGNITER

Engine flameout, a problem encountered by jet aircraft, may be eliminated by a simple automatic reigniter tube that is smaller than

a cigarette and has no electrical connections or moving parts. The tube, which is made of a platinum-rhodium alloy that has high heat retentivity and acts as a catalyst for fuel combustion, is kept at a high temperature in the engine's combustion chamber. Following the flameout, the catalytic action and retained heat of the tube enable it to restart the engine automatically.

ALL IN THE VIEWPOINT

Some people always grumble because roses have thorns, instead of being glad that the thorns have roses.

Prepare Test for First Aid Finale



The problem to be used as a test in the final match for the Inco inter-plant First Aid championship is being hatched here as Tom Crowther (right) of the safety department confers with another expert on first aid training, Bert Debney of the open pit. When these two got their heads together it was a sign of a turbulent time for the Copper Cliff and Frood-Stobie teams that will battle it out for the Ralph D. Parker shield at the Inco Club, Sudbury, Friday evening, April 11, starting at 8:00 o'clock.



Sinter plant Maroons' goalie Rossi makes one of his many great saves of the game while bandaged Ernie Foucault comes in to clear the puck, followed by Pulverizers' Hap McKenzie. In the background is Art Harvey. Maroons won the game 6 to 4.

Gives Tips On Starting Seeds

Growing annuals from seed can be among an amateur gardener's most interesting and gratifying experiences. Authority for this observation is Ted Fosten, and he ought to know; each year he grows many hundreds of annuals which, by mid-July, transform his rock-ribbed garden on Power Street, Copper Cliff, into a real beauty spot.

Starting your own plants from seed is not really difficult, Ted explained, if you take a little care and time. Requirements are quite simple — boxes, soil, seeds, heat, moisture and a cold frame. Ted considers a cold frame vital to successful plant growing. Many gardeners grow plants indoors, but he thinks these are inclined to be soft, and he advises putting them outside in a frame for a couple of weeks to toughen before setting them out in the garden.

Constructing a cold frame is quite simple and inexpensive, Ted pointed out. The one he has used for the past 10 or 12 years was made from a few short pieces of 2" x 4", some short boards, building paper and a few bolts and clamps. A storm window from the house makes the top and a couple of light bulbs provide the necessary heat at night.

Consisting of two ends, a front-piece and back support bolted to the wall, the frame can be assembled each Spring in a matter of minutes. The sections are quickly bolted together with angle clips. The window Ted uses as a cover, and which is hinged to the back support at the wall, measures 40 by 65 inches. In this area he can set out at least 10 flats, each containing several dozen young



Ted Fosten sets out flats of seedlings in his simply constructed, easily assembled cold frame. A couple of light bulbs heat it to hasten growth.

plants. Space is valuable so none is wasted.

In order that maximum sunshine be obtained, a south or south-west exposure should be chosen for the frame. Ted added a word of warning about sunshine, however. Always open the glass top on sunny days, he cautioned, and let air circulate within. If the frame is tightly closed on sunny days the heat inside will bowl your plants over like tenpins. It is advisable even on dull days to open the frame unless the weather is particularly cold. The light bulbs provide heat at night which, while not essential, helps promote growth.

The last week in March is about the right time to start most common annuals from seed, Ted said. This gives them about two months before they are set out in the garden. A few varieties such as lobelia should be started a bit earlier. Pansies too should be sown around mid-March. A rule

Ted finds useful is that the smaller the seed, the earlier the start.

Ted makes no secret of how he starts plants, and was happy to discuss it with the Triangle. First his seed soil is sterilized to kill weeds and fungi. He uses boiling water but said baking in the oven is also a good method. The seed soil is a mixture of sand, loam and vermiculite. Seeds are sown according to directions. Seed boxes are kept well watered and covered with glass on top of the furnace, where germination takes place in a few days. When the seeds start to germinate they should be watched closely, Ted said, and not allowed to grow spindly. He moves the boxes to light and air as soon as the seedlings break through the soil, finding that a few hours at this stage can make quite a difference.

"Damping off," a common seedling killer, can be prevented to a large degree by the application of fungicides and care in watering. Do not water on cool, dull days when surface water will not readily evaporate, Ted advised. This moisture helps breed the fungi that "damps off" the seedlings.

As soon as two or three leaves are established, (about two weeks or so) seedlings should be set out individually into flats and placed in the cold frame. Soil used in the flats is a richer mixture, Ted said, consisting of fertilizer and loam. Each fall he prepares a good mixture in one flower bed for use in his flats. Dusting with insecticides is a good move, he said, especially for cutworm. Chlordane Dust he finds very effective. Once the seedlings are established in the flats, light, heat and moisture are all they require to develop into sturdy plants. A thermometer inside the cold frame is useful.

Plants will not grow well in basements, he pointed out since, there is not sufficient light, air or heat. Other methods of providing heat in a cold frame are a base of well-rotted manure, or laying heating wires on the ground to form a sort of inverted electric blanket. Ted prefers light bulbs, however, for simplicity, efficiency and economy.

About 20 varieties of popular, proven annuals are grown at the Fosten home and each year Ted likes to try out a couple of new

strains. This year it is marigolds and snapdragons. He finds massed beds of one color flower most effective in a garden.

It was in 1940 that he started gardening seriously, and since then has transformed his grounds into one of Copper Cliff's beauty spots, adapting the rock to his brilliant display of bloom. All flower beds were made by hand, since no soil existed there at the start. He thoroughly enjoys all phases of gardening but admits that getting the plants started gives him the most satisfaction — even more than having strangers stop to admire his midsummer show.

Ted is a general plant foreman at the copper refinery. Besides gardening he is an ardent angler and hunter who somehow manages to work in enough time from his flowers for a weekly fishing excursion and a few good hunting weekends.

Wins Acting Award



DENIS KALMAN

When he saw the play "The Children Hundreds" in London some years ago, Denis Kalman little dreamed that one day he himself would win an acting award for the part of Mr. Cleghorn, the Labor m.p. But that's just what happened.

Coming to Sudbury two years ago when he joined Inco's mechanical engineering department, Denis became interested in the Little Theatre society. Although he had no previous dramatic experience he more than made up for this with study and enthusiasm, soon was handling difficult character roles convincingly.

In the recent Quonta region competition of the Dominion Drama Festival, his portrayal of Mr. Cleghorn in the Sudbury society's production of "The Children Hundreds" received the best supporting actor award from the British adjudicator. It was only the fourth part Denis had ever taken in a play.

Another member of the Sudbury cast, Miss June Jeffery of the Copper Cliff public school staff, was also to be congratulated for winning the best actress award in the part of Bessie the maid.

The first annual Quonta region competition, a great success, also drew entries from Manitoulin Island and North Bay, as well as the winning play from Sault Ste. Marie.

Fred Deschenes Honored at Stag Party



A bunch of the boys from the nickel reverb department at Copper Cliff smelter enjoyed a stag party at Jim Rogers' handsome home in New Sudbury in honor of one of their workmates, Fred Deschenes, who was retiring on pension after almost 23 years of Inco service. They presented him with an easy chair, and sent a bouquet of roses to his wife. Picture shows the happy gang, with Fred proudly demonstrating his gift. That's Jim, second from the right at the back.



Mr. and Mrs. Lemke, busy at home with the master chart of their Cub pack's progress.

Double Pack of Wolf Cubs, Their Community Work

Martin and Ruth Lemke of Copper Cliff are another fine example of a husband-and-wife team making an active contribution to their community. They are cubmaster and assistant cubmaster of 1st Copper Cliff Wolf Cub pack, actually two packs which meet and work together as one group on account of the shortage of leaders.

With each pack registering 22 boys, and weekly attendance running close to the 40 mark, they're a healthy handful to handle, but to Mr. and Mrs. Lemke they represent both a challenge and a privilege.

Martin Lemke, a mechanical subforeman at Copper Cliff who has been an Inco man since 1935, was assistant to cubmaster Harold McKey back in 1947, and the following year took over as cubmaster of 1st Copper Cliff pack. For the past 11 years he has been that pack's reliable and particularly capable leader. In 1955, when he lost his assistant, Martin asked his wife to help out, at least temporarily. Mrs. Lemke says it has been the longest temporary job she ever had, but also among the most



"Akela! We'll do our best!" rattles the rafters at Copper Cliff Community Hall each Tuesday night the Wolf Cubs give their grand howl. Akela (Old Wolf or cubmaster) is Martin Lemke, seen with his assistant cubmaster, his wife Ruth. Senior sixers Brent Chambers and John Roy, crouched in the centre of the circle, cry "Dyb! Dyb! Dyb!" meaning "Do Your best!" to which the Cubs answer "Dob! Dob! Dob!" meaning "Do our best!" This pack, the Triangle found, can outhowl real wolves.

interesting. Having been a Brownie and Girl Guide leader for several years, she was admirably suited to help her husband with the Cubs.

Each Tuesday evening, September through June, this efficient, smooth-working team control and guide the boisterous, healthy exuberance of their Cub pack at the Community Hall in Copper Cliff. The Triangle had the opportunity of watching them at work one evening, and from the opening ceremony through inspections, instruction, training and game time saw them keep this vibrating gang of youngsters organized, active, and obviously very happy. The respect and liking of the boys for their leaders, on the other hand, was clearly shown in their good behavior, cooperation, and the number of them present.

The responsibilities of leading a Cub pack are by no means confined

to the regular Tuesday night assemblies. In between times there are programs to be planned, progress reports and charts to keep up, and various unscheduled activities and details to take care of. It all adds up to quite a slice of his off-work hours, Martin said. He also admitted with a grin that the older he gets the tougher it is to keep ahead of — or even abreast of — these supercharged young Canadians.



Second star work includes first aid. Ricky Rumney is the patient.



Mrs. Lemke instructs a group of the boys in tying knots, one of the tests they must pass to earn their first star.



Rope climbing is another handy knack taught to the young Cubs.

The Lemke children have all been through Cubs and Brownies and are proud of their parents' participation in this work. Bob, the eldest, was a Cub Scout and member of the Air Cadets. Linda has been through Brownies and Guides and is now with the senior Hi-Y. Alice-Anne has followed her sister and is now with the junior Hi-Y while David went from Cubs to Sigma C, a church group, and recently into junior Hi-Y.

And of course Mom and Dad assist in these other activities too. On the first day of spring Martin and Ruth were chaperones for the junior Hi-Y dance, and the following day were host to 24 senior Hi-Y members for the main course of a progressive dinner. Never a dull moment for this couple!

In addition to Cub work Martin is a church elder, acting Sunday school superintendent, chairman of the Sudbury Boys' Work Board and active in the Sudbury Memorial Hospital fund drive. He likes to go fishing when he gets the chance, and says if more time were available he would join the curling club. That their youth work does interfere to some extent — such pleasures neither denies, but both agree that a certain inner reward is ample compensation.

Mrs. Lemke says that small boys are more fun to work with than small girls because they are up to more mischief. Little girls are inclined to want to appear prim and older, she has found, whereas little boys just want to have fun. And usually do, she added.

History of Nickel Traced Far Back

The early history of nickel has been rolled back some 4,000 years as the result of research findings presented in a paper published in the current issue of the American Journal of Archaeology.

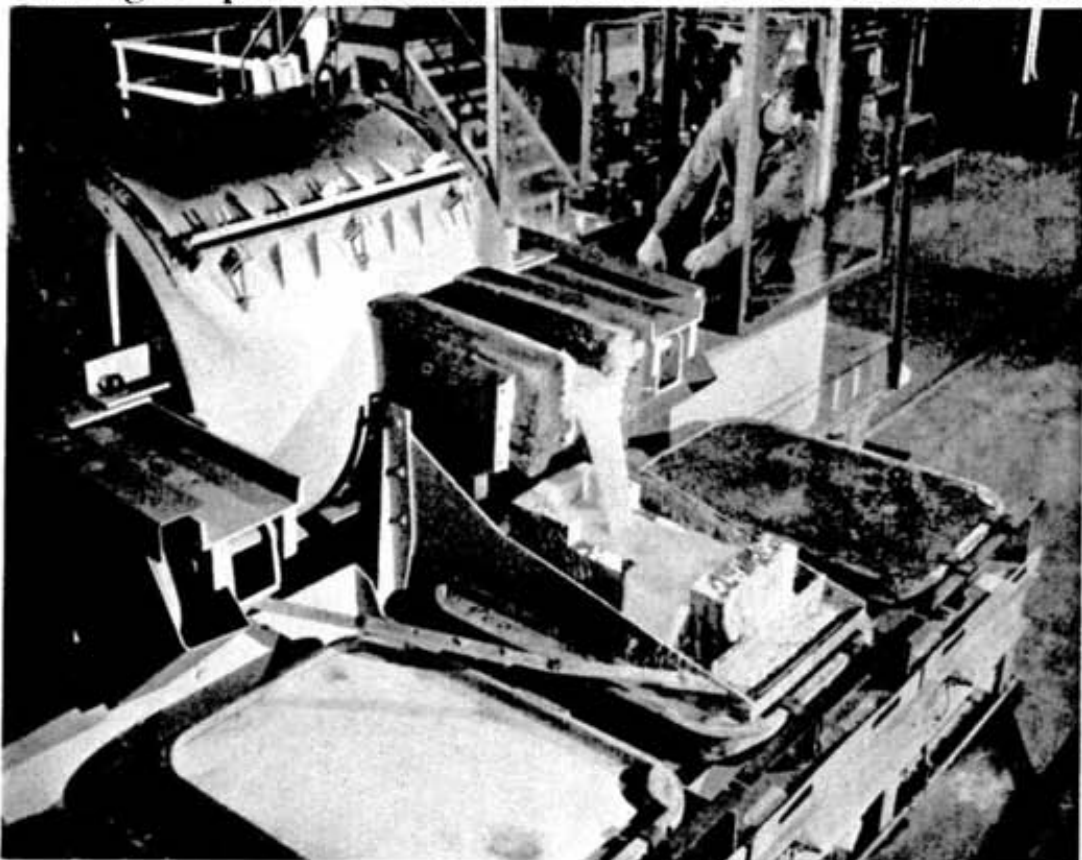
Whereas nickel's known uses had previously dated from about 170 B.C., when a cupro-nickel coinage was developed in the Kingdom of Bactria, the research paper takes the history back to the ancient civilizations of Sumeria, Syria and the Indus Valley. Nickel, it says, is now known to have been present in significant amounts in certain bronze tools and implements made almost 6,000 years ago.

The authors of the paper are Charles M. Schwitzer, manager of market research of The International Nickel Company, Inc., and C. F. Cheng, formerly associated with Inco's development and research division.

They report that many ancient bronzes contained traces of nickel which was "sometimes associated with copper in the type of ores available to ancient man." But some articles contained nickel in quantities greater than 1 per cent, and this content could hardly be dismissed as "simply a fortuitous impurity." The authors raise — but do not answer — the question as to whether artisans of the ancient civilizations of Sumeria, Syria and the Indus Valley may have consciously selected nickel-containing copper ores when fashioning weapons and tools requiring strength and hardness.

Actions speak louder than words — but not so often.

Casting Sulphide Anodes in New Process at Port Colborne



Peter Schurings, ladleman, is seen operating the semi-automatic anode casting machine in Inco's new process for electrorefining nickel at the Port Colborne works. Molten sulphide is tapped from a melting furnace into the drum of this casting machine. Self-propelled on standard gauge tracks, the machine then passes over a row of anode moulds, filling each in turn as shown in the photograph. As it pauses at each mould, about 475 lbs. of molten sulphide is poured from the hydraulically-tilted ladle onto an attached diffuser to spread the sulphide over the mould.

Direct Electrolysis of Nickel Matte Features New Inco Refining Method

Research scientists and engineers of International Nickel have developed a new process for the electrorefining of nickel. Ralph D. Parker, vice-president in charge of Canadian operations, announced March 10.

He described the new method, developed after seven years of continuous study, as a major achievement in chemical metallurgy.

A main feature of the process is the direct electrolysis of nickel matte, an artificial sulphide. This contrasts with the usual electrorefining methods, including those employed in the nickel industry,

in which a metal anode is used.

The new Inco process eliminates high-temperature oxidation and reduction operations, with attendant losses of metals and sulphur and selenium. Instead, nickel sulphide of low copper content from the Bessemer converter or other source can be cast directly into sulphide anodes and electrolyzed for the production of high quality nickel.

Another unique feature of the process is that it permits, for the first time in nickel refining, the commercial recovery of elemental sulphur and selenium as valuable

by-products, in addition to cobalt and precious metals conventionally recovered.

Declaring that the new process is more efficient than the Company's present practice, Mr. Parker said its development constitutes still another step forward in Inco's program to obtain maximum recovery of useful elements from the ore it mines.

International Nickel recovers 14 elements from this ore — nickel, of which the company is the world's largest producer, copper, cobalt, platinum, palladium, rhodium, ruthenium, iridium, gold, silver, iron, tellurium, selenium, and sulphur. At present at Copper Cliff sulphur is being recovered in the form of liquid sulphur dioxide and sulphuric acid from the Company's reduction works, and selenium is recovered in the refining of copper.

The process, for which Canadian and United States patents are pending, is in commercial operation in a section of the Company's Port Colborne nickel refinery. Sulphur-selenium separation is accomplished in a 100-ft.-high fractionating column of special design.

The interesting possibilities of the new method were first demonstrated in Inco laboratory tests in 1951, when a small piece of cast nickel sulphide was electrolyzed. It corroded smoothly the nickel and other base metals passing into solution, leaving a precious metal-bearing anode sludge containing 97 percent elemental sulphur.

A number of obstacles to the recovery of sulphur of high purity from the sludge were resolved by laboratory and pilot plant investigations. These studies, conducted jointly with Blaw-Knox Company, resulted in the construction of a novel 100-tons-per-day sulphur fractional distillation unit. The sulphur from this unit contains less than five parts per million of selenium and has an unusually low ash and bitumens content. The selenium residue is shipped to Inco's copper refinery at Copper Cliff, where it is processed for recovery of pure selenium.

The development of the new Inco process was the subject of a comprehensive technical paper presented at the recent annual meeting of the American Institute of Mining, Metallurgical, and Petroleum Engineers in New York City. The authors of the paper were L. S. Renzoni, superintendent of research, The International Nickel Company of Canada, Limited, Copper Cliff, and R. C. McQuire and M. V. Barker, manager and chief research chemist, respectively, of the Company's nickel refining division at Port Colborne.

Answered Inco Call For Wartime Help

His youthful appearance making his age of 69 hard to believe, Copper Cliff smelters' Adrien Seguin has retired on disability pension with a heart condition. It was not until during World War II that he came to work at Inco, at the age of 55.



Mr. and Mrs. Adrien Seguin

He married Marianne Courville at Sturgeon Falls in 1913 and gets great joy from their family of six and their 13 grandchildren. Two of their sons work at Copper Cliff, in the crushing plant and Albert in the converter building. Their daughter Juliette's husband, Jerry Delorme, is a welder at Copper Cliff. Their sons Leo and Wilfred are employed in Sudbury, and Edmond in Windsor. Another son Ulric died in an accident several years ago.

Adrien lived in Montreal until 1916, then moved to Sturgeon Falls and worked during the next quarter century in the paper mill there. In 1941 he went to Nobel to make cordite, then came to Sudbury and Inco in 1944, starting in the Orford building and later transferring to the sinter plant.

THAT THIRSTY MILL

Almost two billion gallons of water are used annually by International Nickel's mill at Copper Cliff.



R. C. McQUIRE

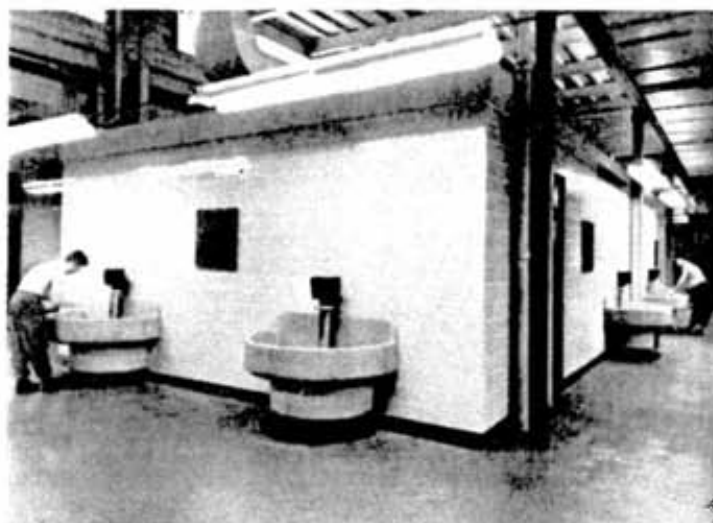


L. S. RENZONI

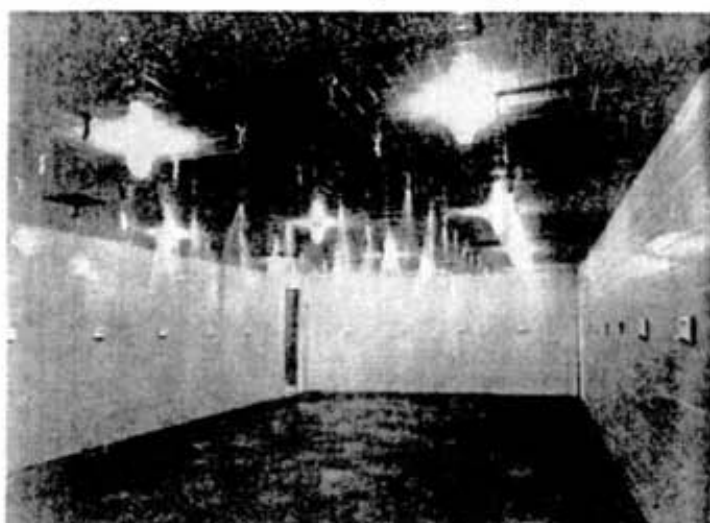


M. V. BARKER

Finest Facilities Provided for Copper Refinery Employees



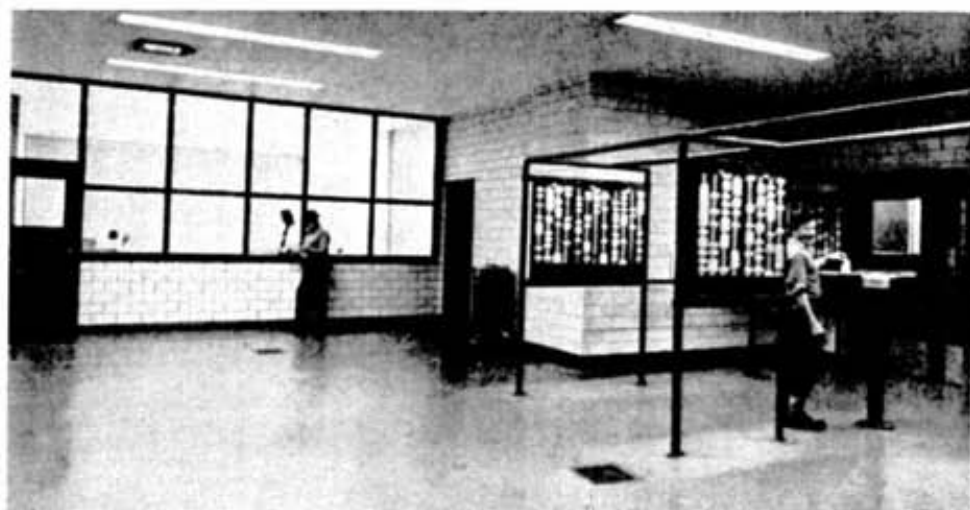
Jack Smith and Jan Piro use wash fountains controlled by foot pedals.



Some of the faucets were turned on for this picture of shower room.



Franz Kokol is the sweeper in this aisle view.



Clocks and time office are shown in this view of foyer, reached by tunnel from main gate.



The brightly lighted first aid room is well equipped for dressings.

New Changehouse a Credit to Plant

The finest facilities are provided for Inco copper refinery employees in their handsome new changehouse.

Located on the ground floor of a new building, the second storey of which is occupied by the control laboratory, the changehouse offers an unusual convenience in being direct-connected to all the plant's main buildings except the office. A tunnel leads to the shops, and other sections of the works are approached through the tankhouse.

The changehouse is equipped with 722 steel lockers having a separate exhaust system for drying and ventilation.

A specially equipped room containing eight washup sinks and a drier is provided for tankhouse employees to wash out work clothes that may have been splashed by electrolyte during the shift.

The large central shower room has ceramic glazed walls and ceiling, and terrazzo floor. Around the outside of the shower room are installed semi-circular wash fountains and plate glass mirrors.

Offices in the administrative sec-

tion of the changehouse have buff tile walls, accoustical ceiling, and tile floor.

A first aid room completely equipped for dressings adjoins the office of the plant safety engineer, which opens off the large entrance foyer in which the time clocks are located. Also opening off this foyer are the personnel office and the time office, the latter having a pay window for the use of the paymaster.

Brightly lighted and well ventilated, and kept gleaming clean by attendants who take pride in their work, the new changehouse is a credit to the Inco copper refining operations, which have a widespread reputation for good house-keeping as well as quality production.

U.S. STANDARD OF LENGTH

A metal bar made of an alloy of the precious metals platinum and iridium is the basic standard of length in the United States. The bar, which is exactly one meter long, was brought from France in 1890 and is a duplicate of the international length standard in Paris.

Safety and Personnel Officers Occupy New Quarters



Attractive quarters for the safety and personnel officers are included in the administration section of the new changehouse building at the copper refinery. In the picture on the left J. Lionel Roy, the plant safety engineer, discusses a safety procedure with Gil Walsh of the carpenter shop. The picture on the right shows the personnel officer, Carl Wilson, conferring with Andy Martin, lead welder helper.

Farmed Where Gatchell Is Now

John DeMonte worked first as a farmer on coming to Sudbury in 1931. He spent two years on the farm of the late Mr. Gatchell in the area that now bears that name, and well remembers refusing an offer of a couple of acres of farm land. "I wanted to get away from farming," he says. Since then those acres have produced a nice crop of homes.



Mr. and Mrs. John DeMonte

John has few regrets, however. In 1933 he joined Inco at Copper Cliff and says he has been a happy man ever since. Retired now from Vic Baker's town crew on a disability pension, he has many pleasant memories of his years at Inco. The time he built the new stone steps to the general manager's house and the high praise his work evoked from the lady of the house is one of his prized recollections.

Barelling matte in the converters was his first job followed by a spell at fettling on the reverbs. He spent many years in the Orford building and his old foreman Harry Trotter (retired) still sends him a card each Christmas from Hamilton. In the early forties John joined the mechanical department and in 1944 switched to the town crew, with which he remained until retirement.

Born on a farm in Italy in 1906 he worked in brickyards at home

and in France before joining his father in Welland in 1923. His father had worked at Creighton earlier and John remembers him telling of getting lost in the bush on his way to Copper Cliff.

John soon left Welland for Niagara Falls, where he met and married Mary Bonaldo in 1929. He worked there seven years before coming to Sudbury. He says he and his wife are the oldest residents on Copper Street, having built one of the first houses there.

The DeMonte's have a family of four. Their daughter Zelinda's husband, E. Perreault, works in the sinter plant and Olinda is with the mechanics at Copper Cliff. Sylvia and Rosalia (Mrs. T. Michelson)

both live in Sudbury. They have five grandchildren.

Interested in gardening among other things John is looking forward to his retirement. Come spring he hopes his health will pick up so he can spend some time at the neat little motel he purchased at Little Current several years ago. There are plenty of jobs there for a handy man like John.

HARD REFLECTIVE METAL

Rhodium, one of the precious platinum-group metals, is employed for reflecting surfaces on search-lights and motion picture projectors because it exhibits a hard, brilliant white, non-tarnish-

ing surface which is extremely resistant to corrosive conditions.

John Was Stalwart Of Orford Building



John Kulack

Retired now on early service pension, John Kulack of Copper Cliff smelter said "It has been a good place to work" as he looked back over his years with Inco. With some pride he added that he always tried to do a job willingly and well, a trait that gained him the respect of all. John will be missed in the Orford building.

Born on a farm in the Ukraine in 1894 John joined his brother in Winnipeg in 1926. He farmed and worked on railway extra gangs for three years spending, some time at Flin Flon and Port Churchill. A sister-in-law at Coniston suggested he try this area and John started on the track gang at Copper Cliff in 1929. He moved to the old Orford stripping floor, spent 13 years on the ore bins and worked his remaining years as a transferman. Said John, "That was a good job, I liked it."

In 1919 he married Sophia Zebe-

luk, who has remained in the Ukraine. He has a son and daughter there, plus five grandchildren he has never seen. He is planning on correcting that situation soon.

John is fond of gardening, his

Whittaker Street home boasts several fine apple trees as well as flowers and vegetables. Cooking savoury old country foods for his friends is also something he enjoys, that and meeting old smelter friends for a gabfest.

Tremendous Finish by Wolves Tops Off Hockey Season



Although they lost the semi-final playoff series to Kitchener-Waterloo Dutchmen, Sudbury Wolves really gave the faithful something to get excited about. Many experts had predicted a four-game sweep for the Dutchies but the Wolves battled them right down to the seventh game and at one time were ahead in the series. After dropping the opener at Kitchener they took the next two games at home in real story-book style, coming from behind repeatedly. The following two games in Kitchener produced a tie and a loss for the Wolves, then a loss at home and another in Kitchener wrapped it up. From an early season cellar-dwelling club coach Peanuts O'Flaherty developed the Wolves into the league's best contender. In the above picture the puck bulges the net as O'Brien (10) gets a backhand away to beat Wolves' goalie Mitchell, who replaced the injured Johnny Albani for most of the series. Uniac of Kitchener may be seen behind Norm Guimond (on knees) and George Seniek is the other Sudbury player. Kitchener won this game, the last played in Sudbury, 6-3.



In his well-equipped basement workshop Joe Laberge does some repair work on a model Spitfire while his sons are busy on the Messerschmitt they are helping to build. Roger is installing control guides in a wing and Raymond is sanding the fuselage.

Joe Laberge and His Boys Find Model Aircraft an Excellent Hobby

Compared to rocket building the construction and operation of a mere model airplane might appear dull to some, but to Joe Laberge the building and flying of model aircraft is a very enjoyable hobby. He has been at it for over 25 years.

Starting back in the lean and hungry thirties with small rubber band-powered models over which there was little control today Joe flies some pretty big jobs with motors that develop up to $\frac{1}{2}$ hp and controls that maintain contact with the plane at all times.

When Joe decided to start this hobby he didn't ask for help but studied a book about it and developed his skill by trial and error. In those early days, he recalled, the manager of a Sudbury theatre let him use the building on Saturday mornings for trial flights, with the stage acting as a launching site. While crack-ups were numerous no planes were lost.

It was in 1937, Joe said, that he made and flew his first gas-powered job. It was a high winged monoplane and since contact controls had not been introduced, locally at least, free flight with preset controls was the order. In this, controls are adjusted to make the plane circle and climb. One of his early flights took off from the site of Pioneer Manor and, instead of circling, headed for Stobie and points north. It cost Joe \$7 air

time with Boyd Smith in an Austin airways plane before the stray model was located, but it was worth it he said.

In 1941 Joe bought his first contact control handle. With this device the operator has the plane on a leash at all times, unless the wires break. The control handle consists of a double reel of braided monel wire encased in a handle which permits control of either reel independently. Both wires are attached to control guides in the plane wing tips, and these in turn activate the tail elevators so that a plane may be put through many maneuvers including dives, banks, loops, etc. When attached to the control wires the plane usually travels in a 100-foot circle with the rudder fixed to oppose the pull of the control wires in order to keep them taut.

A good control handle costs about \$13, Joe said. He has made several himself which, while not very fancy, are quite serviceable.

Planes are made from balsa wood, covered with silk, then given several coats of airplane dope and paint to add strength and rigidity. The tiny 1-cylinder gas engines that power them and the plastic props are the most expensive items. The larger engines, which develop up to $\frac{1}{2}$ hp at 10,000 rpm cost about \$22, and a plastic prop \$1.25. The latest plane Joe built,

a model of the Spitfire, famed Battle of Britain fighter, cost \$35 to complete. He made this plane from scale plans. It weighs nearly 4 pounds, has a wing spread of 54 inches, and took about 40 hours to build. He is now making a model of its German counterpart, the Messerschmitt.

When learning to fly new model planes prop casualties are heavy, Joe said, so he and his sons Roger and Raymond have made many of their own out of birch, which takes a lot of whittling and rasping but cuts down the cost of their hobby.

The tiny glow plug engines they use vary in power output from 1 12 to $\frac{1}{2}$ hp, Joe told the Triangle. The larger engine weighs about 6 ounces, is 3 inches high and 1 $\frac{1}{2}$ inches in diameter. It gets its name from the tiny glow plug, similar to a spark plug, set in the top of the engine which, when electrically charged, heats up and glows, igniting the vaporized fuel that is drawn into the cylinder. A 6-volt dry cell battery provides the initial power, but is disconnected when the engine is operating. At 10,000 rpm one of these little engines will propel a model aircraft at speeds from 40 to 80 miles an hour, buzzing furiously like an angry hornet.

Fuel for the engines, a special type of gas, costs \$12 a gallon. The average model tank holds some 2 ounces, which will keep a plane in the air for several minutes. In a recent test, Joe said, three Americans kept a model plane in the air for 40 consecutive hours, refueling by means of a fine tube attached to the control wires.

Joe has kept a log of all models he has built. The Spitfire was No. 171. His elder son Roger, with less than half his father's flying years, has already made 135 models.

Some planes are constructed from prefabricated kits, others from scale plans and still others are of original design. These latter are particularly tricky since the balance is so delicate, Joe said, and it can only be truly tested in actual flight, so many crackups result.

Joe and the boys do most of their flying at O'Connor park, on Lake Ramsey in winter, or in any large open area that is available.

Before entering the Air Force in 1939 Joe had helped build several full size planes in Sudbury. He spent five years as a mechanic in the Air Force and managed to get in quite a few flying hours. He is a carpenter helper at Frood mine, where he has worked since 1947.

Joe's hobby is a family affair, with his daughter Georgette also taking an interest. Roger and Raymond are both pretty handy at building, repairing and flying.

Joe would like to see more teenagers interested in model aircraft, and would be glad to help organize a club. As a hobby, model airplane building and flying is tops, he thinks, and no more costly than many other leisure time pursuits. A person can spend a lot of money at it but that is not a necessary condition of enjoyment. His well-equipped basement workshop is a haven for model plane builders and there are lots of times he says he can't even get near his own work bench. Complaining? Not Joe — he thinks that's wonderful!



"Fill 'er up!" in this case means only a couple of ounces of fuel, which will keep the little plane in the air for several minutes.



Young Roger Laberge puts a model plane through some stunts for the entertainment of Sunday strollers in Bell Park.

Skips Her Rink to Ontario Curling Title



Edna Johnston upheld the family reputation in fine style when she skipped her Sudbury Granite Club rink to the ladies' curling championship of Ontario in the 3-team final series at Port Arthur. Sharing the title with her are Lynn Beaver, Marnie Brunton, and Edith Ross. A great athlete, Edna has also starred in badminton, bowling and tennis. Her husband Vern, of the mines department at Copper Cliff, has been proudly accepting compliments for her from all sides on her latest achievement.

It's a safe bet that people who sleep like a baby don't have one.



Here are some of the dozen and a half engines that Joe and the boys have for their model aircraft. These vary in power from 1/12 up to $\frac{1}{2}$ horsepower and cost up to \$22.

Brilliant Success Scored by the Levack Figure Skating Club



LEFT: These charming French peasant girls (June Hutchison and Janet McFarland) skated a delightful pair. **CENTRE:** In the front row are some of the cleverly costumed young performers from the junior pageant, *Echoes of Childhood*; left to right, Beverly Karpiak, Connie Rowlands, Laura Crepeau, Elaine Hull, Bobbie Allen, Billy Cameron, Ruth MacNeill, Adele Charlebois, Beverly Mornan, and Wendy Piccolo. Behind them are Ann MacDonald, and Yvonne Allen, a fairy. **RIGHT:** The Levack Figure Skating Club's popular junior pro, Miss Emma Merrifield.

With a cast of 170 members, elaborate costuming, and dramatic lighting effects, the fourth annual carnival of Levack Figure Skating Club would have done handsome credit to a community four times the size.

Junior members opened the spectacular show with a cleverly planned pageant, *Echoes of Childhood*, staged to nursery rhyme music and bringing forth a wonderful swarm of baby birds, chicks, ducklings, candy canes, bunnies, and party girls.

Then came the senior extravaganza, smartly themed to *Around the World in 80 Minutes*, and featuring the colorful native costumes of eight different countries. The smooth skating of the senior members drew much favorable comment and reflected great credit on the efforts of the club professional, Alfio Grotoli, and the junior pro, Miss Emma Merrifield.

Visiting stars who were given resounding applause for their polished performances included Miss Joy Barnard, 1958 Northern Ontario senior ladies' champion, and Miss Gertrude Desjardins and Maurice Lafrance, 1958 Northern Ontario junior pairs champions, all of the Sudbury Skating Club.

Everyone who assisted in staging this most successful of Levack's skating carnivals deserves a pat on the back for a splendid contribution to the community.

Inco Operated

(Continued from Page 2)

and compared with \$23,021,000 in 1956.

"Expenditures during the past year," the report added, "included \$16,178,000 for improvements in smelting, refining and iron ore plants at Copper Cliff, Port Colborne and Clydach, Wales; and \$12,478,000 for the Manitoba project, \$6,188,000 for our underground mine development program in the Sudbury district, and \$4,920,000 for improvements in our rolling mills in the United Kingdom and the United States.



Among the performers in the senior pageant, staged to the theme of *Around the World in 80 Minutes*, were, front row, Phyllis Forget, Jane Butherworth, Margaret MacNeill, Peggy Lou Semple, Sharon Tuomi, and Jousette Nadeau; back row, Audrey Buckingham, Veronica Jalkotzy, Judy Chapman, Dianne Vetterol, Nora Cameron, Marian Picard, Heather Lennie, Susan Sirikka.

"Capital expenditures during 1957, when substantially increased outlays will be made in Manitoba, are expected to total between \$60,000,000 and \$70,000,000."

Outlook

"At the time of writing this report," chairman Thompson and president Wingate said, "the demand is soft for our principal products, nickel and copper, and the outlook for 1958 is that our customers will not take as much of our production as they did during the past year.

"As the year 1958 opened, stocks of nickel available to industry were accumulating in our hand as well as in the hands of others, and the production capacity of the nickel producers was higher. As a result more nickel than ever before will be available to industry in 1958.

"The reversal of the supply-demand situation for nickel is a

result primarily of increased production, reduction of defence and stockpiling requirements, and the slackening of general industrial activity in North America, the duration of which cannot at this time be forecast. Another important factor is the suddenness of the change. Civilian industry, accustomed for eight years to thinking in terms of inadequate supplies of nickel, has not had sufficient time to adjust itself to conditions of plentiful supply.

"The long-term outlook for nickel is excellent. During the years of shortage for civilian purposes, nickel has demonstrated that its many properties fit into the pattern of modern technology. This strengthens our conviction that nickel will have even greater economic value than in the past, and that there will be a long future of upward trend in nickel consumption. Our faith in the future of

nickel is clearly demonstrated by the determination with which we are proceeding in the development of our great new source of nickel supply in Manitoba, which will come into production in 1960 as scheduled. Hand in hand with this project, all of the years of experience of the Company in market development are being called upon to accelerate the uses of nickel over a wide base of applications in all parts of the world."

THE UNSEEN REFEREE

The only person who listens to both sides of a family argument is the woman in the next apartment.

SHORT COUNT

Money may talk, but today's dollar doesn't have cents enough to say very much.

Canadian Springtime Display Again Moves into Inco Window



According to the book *Spring* arrives on March 21, but it isn't really official in Sudbury until the Inco Spring Window has been installed in the Chamber of Commerce offices at the corner of Elm Street and Frood Road. In the above pictures part of this year's wonderful Spring display is seen in the making in a Toronto studio. On the left Harry Despard, the designer who creates the Inco windows, discusses the preliminary sketch with his paper sculpture artist, Ken Carr, and on the right they are shown with one of Carr's skillfully constructed paper animals, a black bear. Except for some details which can only be arranged "on location", the complete display is built in the studio, then dismantled and shipped to Sudbury for installation. Inco receives many congratulatory messages on the artistry and educational value of its window displays from visitors as well as residents of Sudbury and district.

INCONEL

Inconel nickel-chromium alloy resists oxidation up to 2,200 degrees Fahrenheit and has good mechanical strength at moderately elevated temperatures. This alloy, which contains about 77 per cent nickel, is a standard material for heat-treating, chemical and food pro-

cessing equipment, and aeronautical parts such as manifolds and combustion chamber linings.

Thought is the essence of an act, and the stronger element of action; even as steam is more powerful than water, simply because it is more ethereal.—Mary Baker Eddy.

Jack Bowers Over 60 Years in the Cliff



At a well-attended party held at the Italian Club in Copper Cliff Jack is seen receiving a "gold" brick as a reminder of all the bricks he had handled in his day. Denis Thyne made the presentation. A ribbon wrapped round the brick carried the names of Jack's many friends and well wishers. J. R. Feick (seated, left) also presented Jack with a watch and travelling bag. Steve Wilson (standing, right) was master of ceremonies.

Born and raised in Copper Cliff, Jack Bowers has no desire or intention of leaving there now that he has retired on early service pension.

His parents settled at Copper Cliff in 1888 and a log house on Power Street was his birthplace in 1897. His father Angus worked with the Canadian Copper Company and retired in 1915. In those early days, Jack recalled, the school was on Union street, a roast yard was located where the public school now stands, and travel to Sudbury was by stagecoach.

Jack's association with the Company began away back in 1911 but his continuous service dates only from 1922. The first job he held was picking rock at no. 2 mine; then he spent some time in

the shops and also in the old converter building. In 1917 and again in 1920 he went west for the harvest. His job when he signed on permanently in 1922 was loading matte. He worked in the converter department continuously for 35 years.

A bachelor, Jack lives with his brother Frank and two sisters, Mary and Cecelia, all unmarried, in the family home on Balsam street. His younger brother Paul is married and lives in Sudbury.

Jack intends taking things easy now and enjoying his leisure. This summer he hopes to do a bit more fishing and gardening. Meanwhile daily visits with old friends like Jim Hudson add much to his joy of retirement.

Levack Ladies Had Fun at Annual Bonspiel



Not to be confused with the Shriners' Circus, but just as spectacular, is the annual bonspiel of the ladies' curling club at Levack. A one-day event during which the gals manage to get in some sharp curling as well as a barrel of fun, the 'spiel always draws a full gallery of delighted spectators. Picture shows the skips of five of the 12 rinks entered, Mrs. Jean Koski (whose quartet of hillbillies won first prize for costumes), Mrs. Olive Wright, Mrs. Helen Drohan, Mrs. Mildred McGowan, and Mrs. Mary Ribic. The pipers who led the grand march were Ross Dixon and Bill Ferguson of Sudbury. Winning skips in the three events were Mrs. Alice Lejambe, Mrs. Emily Hutchinson, and Mrs. Estelle Hilton.

Harold Grannary Noted Sportsman

Curler, fisherman, hunter, traveler, umpire, ballplayer, hoistman, handyman — Harold Grannary has been all these things and more since first coming to Sudbury back in 1921.

With a wealth of friends he has retired from Frood mine on early service pension and now intends devoting more time to sport and travel. The Grannary camp-equipped station wagon is scheduled for a busy season.

Harold originally came north to play baseball, and spent three years at Nobel before moving on to the Sudbury district in 1921 to join the hot Murray mine ball club. In 1925 he went to play for Bert Flynn at Copper Cliff, alternating at second base with the late Leo McLaughlin. Forced to give up the



MR. AND MRS. GRANNARY

game in 1927 due to a leg injury (he denies the rumour it later affected his eyes) he spent the next several years umpiring. Later he helped coach several kid ball clubs, then finally settled down to being a regular fan, which includes the

Ontario's New Lieutenant-Governor Visits Copper Refinery



A distinguished visitor at Inco's copper refinery was the Honorable J. Keiller Mackay, lieutenant-governor of Ontario, shown above at a rack of cathodes as W. R. Koth, acting manager of the copper refining division, explains details of the process. In the background are Lieut.-Col. C. L. Wilson, who acted as his honor's aide-de-camp for the day; R. R. Saddington, mayor of Copper Cliff, manager of reduction plants; Austin Smith, administrative assistant; Doug Gathercole, president of Copper Cliff branch of the Canadian Legion; H. J. Mutz, assistant to the general manager; J. C. Bischoff, works metallurgist. In the picture on the right the lieutenant-governor is seen as he performs a sod-turning ceremony at the site of a new Canadian Legion hall to be erected by the Copper Cliff branch near the curling rink. Standing at the microphone is the branch president, Doug Gathercole, and seated just beyond him is Mrs. J. Keiller Mackay.

duty of periodically telling Frood manager Wes Johnson what's wrong with his club.

Born in Maine in 1895, Harold was raised in Montreal where he apprenticed as a plumber and also played good calibre ball before going north. He worked at Murray mine for a time and also for a local oil company before joining Inco

at Frood in 1931 as a fitter. He spent several years at the concentrator in Copper Cliff, then returned to Frood and became a hoistman in 1940 on no. 6 shaft underground hoist. During the next 17 years he became one of the better known and most versatile hoistmen at Frood.

The Grannarys have two of a family. Their daughter Sheila is Mrs. S. Smith of Toronto, and their son Donald works in Sudbury. Before their marriage in 1923 Mrs. Grannary was Gertrude Johnson. They have eight grandchildren.

An ardent curler, Harold came up with that game's hole-in-one, an 8-ender, while skipping in the Colts event at Copper Cliff last season. Ice fishing is another winter sport he enjoys. He plans to build a tent on wheels this spring which he claims will be more convenient than the station wagon for overnight stops, the real thing for hunting and fishing trips, he says.

At present he is enjoying his leisure and taking care of his small apartment house on Whittaker street, Sudbury. He and Mrs. Grannary are planning some mighty interesting motor trips for this summer and they hope to see a good deal of the continent in the next few years.

In the accompanying picture, which is also reproduced on our front cover, they are shown planning one of their jaunts.

At a stag party held recently in the St. Clair street armours the boys presented Harold with a purse of money and their best wishes for the future.

The scales of justice might be called the trial balance.



QUICK QUIZ

1. What bridge in Canada is the longest span of its kind in the world?
2. Which has the larger area, Vancouver Island or Prince Edward Island?
3. Of the 10 provinces, how many maintain provincial police forces?
4. In the United States there are how many Canadian-born residents?
5. In what year was the first settlement by white men at the site of the present city of Winnipeg?

ANSWERS: 3. Only Ontario and Quebec; the others contract with the RCMP for policing of rural districts and of some cities and towns. 1. The Quebec Bridge over the St. Lawrence, world's largest single cantilever span. 5. In 1738, by explorer La Verendrye. 2. Vancouver Island, nearly six times as large as Prince Edward Island. 4. Nearly one million, according to the latest US census.

(Material prepared by the editors of Quick Canadian Facts.)

The trouble with life seems to be that one half of it is ruined by our parents, and the other half by our children.

They Find Long-Distance Commuting Restful



These Frood miners travel a total of about 80 miles to and from work every day, but don't mind the commuting a bit — say it's relaxing. In the front are J. C. Daoust of Monctville and A. Steinkhamer of Rutter, and standing are O. Landry, R. Parent, A. Prevost, Al Prevost, and D. Prevost, all of Alban.



ABOVE: J. E. Totton, in charge of the advertising section at Inco's Toronto office, discusses an advertising layout with Ross Booth, account executive of Cockfield Brown & Co., Ltd., advertising counsel. RIGHT: T. R. Dodgson (centre), in charge of public relations and direct mail, talks over a film project with Trevor Lloyd of Public & Industrial Relations Limited, and T. V. Dobson, assistant supervisor of school broadcasts, CBC.



Highly Varied Promotional Campaign Backs Up Inco Sales and Research

Anticipating the turn-about in the supply-demand situation for nickel, Inco intensified its sales, research, and promotional activities.

A program was launched to have the use of nickel restored in applications where other materials were substituted during the period of inadequate supply, and also to increase the nickel content of alloys which had been downgraded.

Market research was expanded, and co-operation with the market research organizations of the Company's customers was further developed.

Expenditures for development

and research were increased. Emphasis was placed on those research projects which promised important increases in the use of nickel. Prominent among these were new nickel steels offering economy and special properties for gears, heavy forgings and service at sub-zero temperatures, and high nickel alloys for automotive gas turbines and for atomic power plants.

As a supplement to the work in its own laboratories, the Company continued to sponsor research in university and industrial research laboratories to broaden the scientific basis for new nickel markets.

At the same time the Company has expanded its promotion program designed to develop wide interest in the use of nickel-containing products. Magazine, newspaper and radio advertising, as well as Company publications, emphasize the ready availability of nickel to encourage its increased use. Increased efforts are also being made to broaden the public's knowledge of Inco, its history and its activities.

On a smaller scale than the programs required to service the nickel market in the United States and Great Britain, but fully representative of Inco's far-reaching advertising and public relations campaign, is the program for Canada carried on at the Company's offices in Toronto.

Here, under the direction of the manager of Canadian sales and

market development, K. H. J. Clarke, and the assistant managers, J. D. McLean and G. S. Farnham, the good word about Inco nickel and the people who produce it is sent throughout the land.

One phase of the Toronto office's promotional activity is by direct mail. To a selected list of 18,000 names, Inco periodicals and technical literature are mailed regularly telling of the remarkably versatile role nickel alloys are playing in modern industry, and announcing new gains scored by the "wonder metal" along the scientific frontiers.

There are 100 different classifications of industry, business, and public services on the Inco mailing list, ranging all the way from paper mills to hospitals, and for each classification the list also carries the names of the men most



LEFT: B. J. Hayden, editor of publications at Inco's Toronto office, is seen through the stator of a big d.c. motor under construction at the Hamilton plant of Canadian Westinghouse Electric, as he covers a story for Inco Copper News. RIGHT: Mary McLeod arranges a display of a few of the items on Inco's literature list, including a copy of the latest booklet, "The Exciting Story of Nickel."



closely associated with its various departments, such as research, sales, maintenance, etc. Working with this highly efficient directory the direct mail section can pinpoint a literature release to any group of industrial concerns or to any group of individuals within those concerns. The job of keeping that mailing list up-to-date by constantly checking a wide variety of sources is in itself a formidable assignment.

Three outstanding Inco periodicals are the foundation of the direct mail material. Inco Magazine, a slick-paper quarterly, beautifully laid out and illustrated, goes to a selected list of 1,000 Canadian executives. Inco Nickel News is sent to the complete list of 18,000 names, as is its companion publication, Inco Copper News, totalling 12 issues a year between them; they carry newsier, more topical reports of the doings of nickel.

People in all walks of industry take their metal problems by mail to the Inco technical library at the Toronto offices. On tap there is a tremendous fund of knowledge concerning nickel and nickel alloys, available in more than 300 different publications such as "Atmospheric Durability of Steels Containing Nickel and Copper" or "Design of Nickel Magnetostriction Transducers." Every month the direct mail section receives hundreds of requests for this literature, indicating not only the sustained lively interest in the use of nickel but also the confidence placed by industry in Inco's advice and guidance.

Inco's advertising in Canadian newspapers, magazines, etc., is handled by the Toronto office in collaboration with a leading advertising agency. Inco advertising has long been noted for its nationally constructive tone, last year for instance developing the themes of "Inco Metals at Work in Canada" and "Inco Research Helps Canada Grow." The latter theme was also stressed in commercials used with the Company's radio newscasts.

Advertising in the technical press takes a more direct approach, discussing specific applications of nickel in the particular industrial field covered by each publication, whether it be pulp and paper, aeronautical, marine, architectural, or any one of a dozen others.

In broadening people's knowledge and understanding of its activities, and thus improving its public relations, Inco makes effective use of its highly educational motion pictures, including "Mining for Nickel" and "Milling and Smelting of Sudbury Ores," prints of which are loaned by the Toronto office to the many clubs and other organizations requesting them. At some of the displays arranged by the Company, such as its exhibit at the Red River Exhibition in Winnipeg, Inco films are run on an almost continuous basis. Total attendance at Inco film showings during a year runs into many thousands of people.

Although it is in its 11th printing, some 136,000 copies having been distributed, still one of the most popular expressions of Inco's goodwill is "The Romance of Nickel," that excellent little book describing in layman language the growth of the nickel industry from

Figure Skaters in Spotlight



Before a capacity audience of more than 6,000 in the Sudbury Arena, the Sudbury Skating Club's professional, Sandra Duncan, skates a brilliant farewell performance during the club's very successful ice show. She will leave in June to join Shipstad and Johnson's Ice Follies for summer training in San Francisco. Daughters of Dr. and Mrs. A. H. Duncan, she and her sister Margaret (now a nurse at Sick Children's Hospital in Toronto) won both the junior and senior ladies' pair championships when they were members of Copper Cliff Figure Skating Club. Sandra has also taught skating at Woodstock and Parry Sound.



Winners of the Northern Ontario senior ladies' pair championship this year were Lyn Gladstone and Jaye Jarrett, 17-year-olds who won the junior crown in 1956. Lyn's father, Jack Gladstone, is a shift boss in the converter department at Copper Cliff smelter and Jaye's father, Wilbert Jarrett, is a member of the engineering staff at Stobie mine. The girls will skate on April 11 in the annual carnival of the Copper Cliff Figure Skating Club, to which they have belonged since they were 4 years old.

its infancy. As they have for many years, requests for copies come in steadily from all over Canada.

"The Romance" has recently acquired a healthy young rival, however, that threatens to eclipse its popularity. The new book, written primarily for Canadian youth and published in both English and French, was greeted with widespread comment of which the following from the Woodstock Daily Sentinel-Review was typical.

"One of the most interesting and informative brochures to cross our editorial desk in some time is 'The Exciting Story of Nickel' which has been produced by the International Nickel Company of Canada.

"In 32 colorful pages it outlines the discovery of nickel in Canada, how it is processed, its varied uses

in the life of the modern world, and what it means to Canada and its people."

"But what we like most about this booklet," the Sentinel-Review continued, "is the challenge that it places before young Canadians. We have progressed so far in our way of living that there are many of us who feel there is nothing much more worthwhile to discover in this country, whereas there is still a limitless field of opportunity for everyone. As the Inco booklet states, 'Canada is not just a string of cities along the border; it is still a country with hundreds of thousands of square miles to be explored and developed. Who knows how many more of Nature's treasure houses await the coming of adventurous young men to unlock them. And if someone does

find a great new deposit up near the Arctic circle, for instance, it will take the courage and scientific skill of hundreds of young Canadians to get the treasure out and to make it possible to live and work in that far northern country."

"We commend Inco for presenting such a challenge in such a forceful and colorful way and hope the purpose for which it was written will have a marked effect on the thinking of Canadian people of all ages."

Happy Times Ahead For the Fred Philions

A railroad man for more than 40 years, Fred Philion has retired from the transportation department at Copper Cliff on early service pension.

"Railroading at Inco is the way I like it," said Fred. "You can go home after your shift." On the country's two major railways, where Fred spent some 20 years as brakeman, he was away from home too much so in 1936 he just up and quit, then joined Inco.

He worked a short time as a fettler on the reverberatory furnaces before Percy Coombes adopted him in the transportation department. He worked as switchman there until his retirement.

Born at Sturgeon Falls in 1896, Fred landed his first job in the freight office of the T & N O railway at Iroquois Falls. He then spent a couple of years with the CPR, working out of Chapleau and Cartier. Joining the CNR in 1917 he worked out of Capreol, Hornepayne and other northern spots for the next 19 years before coming to Inco.



Fred and Mrs. Philion try out a new spinning reel.

Fred looks and feels in good shape and admits that he would have stayed on the locomotives until full retirement age if that old breath-catching bronchitis didn't knock him for a loop each winter. With time on his hands he can cater more to his whims.

Anne St. George, whom Fred married at Sudbury in 1940, has been the perfect mate, he says. She is as fond of fishing and travelling as her hubby and they now intend doing more of both. Their camp at Nepawass Lake is their pride and joy. To them a perfect holiday trip consists of wetting a line in every likely-looking lake or stream they pass. A happy retirement seems a certainty for this couple with their great zest for the outdoors.



Harry Narasnek, Keith MacNaughton and Ev Staples look with pride upon their protege, young Eddie Hreljac, who this year brought the Canadian junior badminton championship and the Molson's trophy to Creighton Mine Employees Club. He wears the maple leaf as a member of the Canadian team in the international matches against the USA, in which he is undefeated.

Creighton Boy Is Canadian Junior Badminton Champion

Eddie Hreljac, 18, of Creighton Mine, smashed his way to the Canadian junior badminton championship at Victoria on March 5.

The experts who watched his burning speed, power, and court tactics said that if he is able to keep on with his game he will undoubtedly become one of the best badminton players in the world ... if not the best.

He has everything.

What a triumph was this, not only for young Eddie, who richly deserved the praise, but also for those who achieved the practically impossible by producing a Dominion badminton champion from

a little mining camp in northern Ontario.

The odds against it ever coming to pass were probably about 1,000 to 1, but the short end of the odds never did bother Ev Staples very much. He got better with two strikes against him.

It all started back in 1951 when Ev and his wife took a trip to Toronto to see some badminton stars in action. It occurred to Ev that badminton would be a fine game to get going among the teenagers at the Creighton Mine Employees Club.

During the next few months he kept returning to Toronto on week-ends — five times in all — learning how to teach badminton. All-time greats like Jack Purcell and Don Smythe liked his interest and enthusiasm, and gave him lots of help and encouragement.

Ev got his teen-agers started at the game the next fall, 1952. In his first class was a little kid, four or five years younger than most of the others, but already on fire with an intense ambition to be the best. That was Eddie Hreljac.

Within a year he was a semifinalist in the Ontario junior B singles at Stratford. The following year he won it. Before he had played three years he became the first triple champion in Ontario junior badminton. He repeated his triple smash in 1956, won two out of three in 1957, won all three again in 1958. Out of 12 possible Ontario junior A championships he won 11. And it was a clubmate of his, Allan Massey, who took care of the 12th.

Eddie went to Baltimore in 1956 and won the eastern United States open junior title. That same year he played for Canada against the USA in the international matches and won three of his country's six points. He was blazing.

Although he broke an ankle playing football at Copper Cliff

High School in the fall of 1957, Eddie was back knocking at the door of the big trophy room this year. Despite trouble from the ankle he seared his way through to the junior finals, then won the Molson's trophy with a brilliant demonstration of skill and speed.

The Creighton teen-agers are the enfants terrible of the Ontario junior badminton world. Of the 36 people in the final matches last year at the Granite Club in Toronto, 23 were from Creighton Mine. That's saturation.

Eddie and his pals have worked this thing up by themselves, with the devoted help of fellows like Harry Narasnek and Keith MacNaughton, and many others who dug down to assist with the finances.

They couldn't practice under championship conditions, and they had no pros to polish up their playing. But they had spirit, and they had Ev Staples.

One of them became a Dominion champion.

It's really quite a story, isn't it?

Helped Build Plant, Then Became Foreman

Retiring on disability pension while still a comparatively young man, Ed Beaudry nevertheless had been a foreman in the casting department at the copper refinery for 25 years.

Born at Massey in 1909, Ed in his early teens worked in saw mills and bush camps, then moved to Copper Cliff and helped Fraser Brace build the copper refinery. When that plant started to operate he became a member of its casting department. Since then he has

helped produce millions of pounds of the world's finest copper.

Ed recalled that the day he joined the copper refinery, August 4, 1930, was the day that Sudbury became a city.



MR. AND MRS. BEAUDRY

Ed married Evelyn Cote of Sudbury, and last year they celebrated their 25th wedding anniversary. They have a family of six: Noreen, who is married to Don Frattini of the Inco tabulating section, general offices; Beatrice, who is Mrs. Gordon Smith; Thomas, who works at Copper Cliff smelter; Fred and Suzanne, who are at school, and Danny, at home. They have two grandchildren.

Having found work to be a cure for many ills Ed hasn't taken his retirement too literally, and is now happily employed at one of the Sudbury civic carparks, a job that suits him just fine. As everyone who knows Ed will agree, the city has acquired a really top-notch employee.

Education is one thing everyone gets on the instalment plan.

Starred In Juvenile Hockey League



Winning the local league title from Falconbridge in a 5-game series, then defeating the Garnier College squad from Spanish two games straight, the Sudbury Johnny Baby juvenile hockey club went on to beat North Bay, hanging up a classy record before bowing out to Sault Ste. Marie.

Among the most effective members of the Johnny Baby squad were three Copper Cliff boys, Eddie Pagan, Jimmy Pappin, and Dan Heaphy, shown above. Pagan and Pappin patrol the right boards while Heaphy usually lines up on the port side.

Pappin in particular had a great season and was one of his team's top goal getters. He scored high with the big league scouts too, and next fall will be donning a Toronto Marlboro uniform as a member of the Toronto Maple Leaf farm system.

Eddie's dad Louie is a well-known member of the paint gang at the Copper Cliff plant, Jimmy's dad Gerry is a mechanical foreman at the Copper Cliff mill, and Don's dad Pat keeps things organized and active at Stanley Stadium.

Printed in Canada



With his speed and power the Creighton boy could become the best badminton player in the world.